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Feeding Citrus

Fertilizers, Citrus Fruits

By J. F. Bazemore, Florida Manager, Chilean Nitrate of Soda Educational Bureau
Orlando, Florida

Since the beginning of the citrus growing industry in Florida it has been necessary to supplement the natural fertility of the soil in order to produce citrus fruits profitably. In the early days the pioneer growers chose the more fertile lands for their plantings and it was quite the rule to "cow-pen" the plots to be set to citrus for a time prior to setting the trees in order to provide additional fertility.

Subsequent fertilization was in the application of more or less manure or compost plus whatever cover crop grew on the land naturally. This practice was general for many years before commercial fertilizers came into use. Even so, fair crops of good quality fruit were produced and, according to the "old timers", the citrus growers in those days had fewer and simpler fertilizer problems than seem to have come simultaneously with the introduction of commercial fertilizers. In the early days "cow-penning" was "cow-penning" and "compost" was "compost" regardless of the breed, ownership or previous condition of servitude of the herd of cattle involved. There was no one to question the merits of the practice, everything went along nicely and growing oranges proved a fairly profitable business.

As the years passed citrus growing became more popular and incidentally more profitable. Instead of limiting the plantings to the lower lands, higher lands were brought into use to the extent that the so called Ridge Section in the central portion of the

peninsula is now the center of the industry in point of production.

Simultaneously with the increase in the acreage devoted to Citrus in Florida the cattle industry has decreased. There were fewer cattle and more acres of citrus to be fertilized, so, naturally, other methods of fertilization came into general use to take the place of cow-penning, manure and compost of pioneer days in the industry.

When citrus growers realized that the time had come when the original methods of fertilizing were inadequate for the increased acreage, they reasoned that the answer might be in the use of the so called commercial fertilizers but rather hesitated to make the change. This was especially true of the older growers whose groves had satisfactorily responded to the old and tried methods for years. But, younger growers and practically all who had become grove owners in recent years have known nothing but to resort to commercial fertilizers as a means of adding supplementary fertility to their citrus lands.

The question "How shall I fertilize my grove?" has been a front rank question since the advent of commercial fertilizers. Even at present it is a question that most citrus growers ask and get more or less satisfactory answers to several times each year.

In the case of citrus, as has been true of all other crops, we first had theories regarding the fertilizer requirements of the crop, hence the first practices were necessarily the-

oretical. From time to time growers and others have conducted fertilizer tests on their own account but in the majority of cases the tests have been of short duration and not sufficiently checked to develop reliable information. The fact remains that the practice in citrus fertilization in Florida has developed largely from theory and supposition and not with guidance of facts resulting from carefully conducted fertilizer experiments over a period of years sufficient to prove their soundness. Since such facts have not been available in the past it has been necessary to make the best of the situation without them.

Even before the use of commercial fertilizers for citrus became general it was taken for granted that fertilizers for citrus would consist of nitrogen, phosphate and potash. There was no available information however as to the correctness of this assumption. But assuming it was necessary to supply more or less of these three elements in the form of commercial fertilizer, there was no guide as to the amount of each element necessary per tree or per acre, nor was there any way of knowing definitely of the relative efficiency of the various sources of these three plant food elements.

This lack of information made the way clear for speculation in which growers, horticultural authorities, fertilizer folks and others took part freely. It was not long before there came to be rather definite schools of thought. Certain ideas regarding fer-

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Correct Horticultural Names of Citrus Fruits

By T. Ralph Robinson, U.S. Dept. of Agriculture at Meeting of Florida State Horticultural Society

As a first requisite in considering the correct horticultural names of Citrus fruits, perhaps it would be well to consider what constitutes a valid variety name as recognized by pomological authorities. A few years ago the American Pomological Society adopted a "Code of Fruit Nomenclature", which now governs the naming of fruits and which furnishes the basis for deciding disputes as to the proper name for any particular variety. From this Code I will quote the more essential features.

This code aims to establish a simple and clear system of pomological nomenclature that shall be appropriate and stable. Accordingly it is urged that all persons naming new varieties of fruits choose simple one-word names that are fittingly expressive of some character, quality, place, person, or event associated with the source, time or place or origin of the variety.

The paramount right of the originator, discoverer, or introducer of a new variety to name it, within the limitations of this code, is recognized and established.

The term "kind" as herein used shall be understood to apply to those general classes of fruits which are grouped together in common usage without regard to their exact botanical relationship, as apple, cherry, grape, peach, plum, raspberry, etc.

I. Form of Names

1. Names of new varieties shall be of one word preferably, but two words may be accepted. Names of existing varieties shall not be changed in such way as to lead to confusion or loss of identity.

2. The spelling and pronunciation of a variety name shall be the same as that of the person, place, substance, circumstance, or quality from which it is derived.

3. A possessive noun shall not be used.

4. Initials should not be used as a part of a variety name.

5. A name shall not be formed by the compounding or hyphenating of two or more existing names, but this does not prohibit the formation of a one-word name by the use of parts of two or more existing names. The hyphen shall not be used between the words of a name. Thus, neither, Bartlett Seckel nor BarSeck may be used,

but Barseck is admissible.

6. Such general terms as seedling, hybrid, beurre, damson, pippin, rare-ripe, bigarreau, should not be used.

7. A variety imported from a foreign country should retain its foreign name, subject only to such modification as is necessary to conform it to this code, and provided that names having a recognized English equivalent may be, but are not necessarily, so rendered.

8. The name of a person shall not be applied to a variety in his lifetime without his consent.

9. The name of a deceased person shall not be applied to a variety except through formal action by some competent pomological body, preferably that with which the deceased was most closely associated.

II. Priority, Usage and Duplication

10. The name first published for a variety shall be the accepted and recognized name except when contrary to the provisions of this code; but names established by usage in American pomological literature may be retained even though they do not conform to these rules.

11. A name once used shall not be used again for a variety of the same kind, except that a name once established through long usage for two or more American varieties shall not be displaced for either or radically modified unless a well-known synonym can be used in its place; or when no such synonym is available, the varieties bearing identical names may be distinguished by the addition of the name of the author who first described each, or by some other suitable distinguished term.

III. Publication, Description and Citation

12. Publication consists in: (1) The public distribution of a printed name and description or characterization of the fruit; (2) the publication of a new name for a variety described elsewhere under a different name, number, or other untenable designation, the synonym being given.

13. Publication of a name may be made in any book, bulletin, report, trade catalog or periodical of public distribution and bearing date of issue.

14. But a varietal name may be established by current usage in the locality of its origin, when well-known, and shall be considered as

published and have precedence over a later printed name for the same variety.

15. Complete description of a variety consists of a detailed account of the characteristics of the plant, foliage, flowers, fruit, and habit of growth, so as to distinguish it from other varieties of similar appearance.

16. The type of a variety is the fruit of the original plant; and type descriptions or illustrations shall be made from material produced by the available, from a plant as near as original plant, or when this is not possible to the original in a sexual reproduction, and preferably grown in the same pomological region.

17. The full citation of a variety name consists of the name of the author who first described the variety, and the name, page, and date of the publication in which the description first appeared. An author-citation following the name refers to the author of the original description of a variety: e. g., Turley, C.P.C. Names of authors and published works may be abbreviated, in accordance with the usages of this Society.

Adopted November 8, 1923, at the New York meeting of the Society.

With respect to the citrus varieties now commonly grown in Florida the proper names have been clearly set forth in the recent issue by our own Professor Hume of his book on "The Cultivation of Citrus Fruits."

In addition to the common Florida varieties, many varieties which have become more or less absolute and rare are carefully described with valuable and interesting data as to their origin. This wealth of material in a standard book, which I assume is in every citrus grower's library, makes it rather a waste of your time to go into a detailed discussion of the correct names of the standard citrus varieties with which we are already familiar. One comment is however perhaps worth noting, namely the desirability of listing not only the accepted or valid names of established varieties but of giving any other names under which it may have been known at different times or in different places. The publication of such synonyms may save a lot of misunderstanding and some wasted time and energy, on the part of growers, anxious to tryout all promising varie-

ties. For instance the "Hamlin oranges", the valid and accepted name, is also locally known as the "Norris Seedless"; the "Everbearing", was at one time known as "Long's Everbearing", "Pelton's Everbearing" and more recently as the "Tvon-Everbear". Greater familiarity on the part of growers with some of these old varieties would be worth while if only to avoid duplicating the trials of the pioneers in Florida, many of whom conducted Experiment stations of no mean proportions.

Investigations as to the names which are used in the different citrus regions of the world for the one and the same variety are of even greater importance. This will be referred to later on.

The question of trade marking the names of new varieties is frequently raised so that a statement of official policy is perhaps not out of place. A recent statement from the U. S. Patent Office on this subject reads as follows:

"Under the practice of this office, mere names of varieties of fruit can not be registered as a trade mark.

"Mere names of individuals are not registrable as a trade mark under the act of 1905, unless written or printed in a particular or distinctive manner or in association with other features."

There have been in the past some apparent exceptions to this rule but the present practice is the outgrowth of enactments and court decisions of the past half century.

This provision of the law makes it extremely difficult for the conscientious independent originator of a new variety to derive any adequate return for his labors. He is placed at a decided disadvantage as compared with the inventor of a mechanical contrivance. Because of this situation various proposals looking toward new legislation have been brought forward from time to time but the danger of lending support to the unwarranted exploitation of varieties of doubtful value is perhaps sufficient justification for maintaining the status quo. If all new varieties of fruits were subjected to adequate tests in the hands of a properly constituted committee having legal status, before being offered for sale it might be safe to allow the originators of such new varieties trade mark privileges similar to patent rights granted to inventors.

Within the last few years great interest in the citrus varieties of the Orient has been awakened, particularly due to articles published by Dr. H. J. Weber and by Dr. T. Tanaka. Dr. Weber who did most of his early

citrus breeding work in Florida is now Director of the Citrus Experiment Station at Riverside, California. He made an extensive tour of the Orient a few years ago and has written enthusiastically of some of the citrus fruits he encountered. Dr. Tyoza-bura Tanaka, the leading Citrus Expert of Japan was for several years associated with Dr. Walter T. Swingle in Citrus introduction work and has translated for the U. S. Department of Agriculture many important Japanese articles into English. His own writings are quite extensive, especially in the botanical field. These writings have brought into prominence a lot of citrus variety names, strange to our Western ears, and it becomes a matter of extreme importance to know to what extent we already have had experience with these varieties under some other name. It was therefore a welcome opportunity when last fall I was able to have Dr. Tanaka's company on a weeks trip to Florida.

One of the varieties greatly stressed both by Dr. Webber and Dr. Tanaka is the Ponkan,—a large soft mandarin fruit extensively grown in the Swatow region of China and in Formosa. This variety has a number names in the different districts where grown, "Mit tangka" or "Honey-bucket orange" being one of the Chinese names often used. The Department of Agriculture has made several introductions of this orange in the last ten years,—after careful studies of the Ponkan had been made by Prof. G. W. Groff of the Canton Christian College, cooperating with the U. S. Department of Agriculture. From descriptions of the fruit, I had a suspicion that it was already growing in Florida and with the assistance of Prof. E. L. Lord and Mr. H. H. Mowry of Gainesville, I had located, several years ago, some trees locally known as "Chinese honey orange" growing at Mr. Frank Jerkins place near Melrose, Florida. These trees were grown from seed sent from China by Dr. Parks, a Missionary in China, to Mr. J. C. Barrington of McMeekin, Fla. about 1892 or 1893. One of these seedlings survived the 1895 freeze and is still alive, together with some budded trees of good size nearby.

Dr. Tanaka readily identified the tree and fruit as the Ponkan, confirming an identification of the fruit made for me by Prof. Miyazawa two years previously. This is the same variety which has been propagated and distributed rather widely in Florida as the "Wanuro tangerine". It has not proven entirely satisfactory as a commercial fruit because of its soft puffy character. However,

careful investigations made some years ago by Prof. Groff for the Department showed that this orange is at its best only when grown on a special stock, a small seedy mandarin, the Suen-kat, or "sour mandarin". This stock differs from both the Cleopatra (or "Ponka") and the Calomondin but might well be tried on both of these stocks until such time as introduced plans of the Suen-kat become available for trial. The precautions necessary to guard against the introduction of dangerous citrus disease require a rather lengthy quarantine period and the aseptic method of propagation developed for the safe handling of introduced Citrus, (with a double transfer of buds) a stock of any new variety sufficient requires additional time to build up for field testing. Time, however, is cheaper than the spending of millions to eradicate some introduced disease, so we consider it is time well spent.

Not only is the Ponkan grown on a special stock but under a special system of close planting and pruning to form small compact upright trees. This dwarfing system of culture may be as important as the stock in determining the fruit character. Dr. Tanaka describes this method of culture in the January number of the Journal of Heredity.

Thus it becomes clear that Florida has had the Ponkan in disguise for many years. The "Kinneloa orange", known in California about thirty years ago is now also recognized as undoubtedly the Ponkan. It evidently did not suit California conditions as it has apparently disappeared from cultivation.

This case of the Ponkan is an excellent example of how essential it is to develop a reliable synonym of the citrus varieties of the whole world. It is rather a difficult matter as the same variety may behave in a vastly different manner in different regions. Except for the navel mark the Washington Navel of Florida would hardly be recognized as the same fruit under this name grown in California or Arizona. Because of this "place effect" or the effect of environment we are sending from time to time budded plants of our important standard varieties to be grown in China, Japan and the Philippines and compared with the local varieties in the region of their probable origin. In this way, the mystery of the source of the Valencia, for instance may possibly be solved, which suggests possibilities in the way of securing better strains, earlier or later or more resistant to splitting.

The "place effect" makes it necessary to reserve judgment when we

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New Fruit Regulations Announced

By Charles M. Hunt, Plant Control Administration, Orlando

Certain requirements in regard to the operation of packing houses and handling of fruit have been changed or modified so that the following will have precedence over previous instructions:

Administrative instructions have been received that will permit fruit produced outside of the eradication area to be packed in houses within the eradication area without its destination privilege being sacrificed, PROVIDED THAT no fruit produced within the eradication area is in the house at any time during the period when such barrier area fruit is contained therein. Except that packing houses located within the eradication area that contain distinct sets of coloring rooms, washing, sizing, grading, machinery and precoolers in complete units operated separately may receive special permission to handle at the same time fruit produced from all areas. But such permission will be granted only after the State Plant Board is thoroughly satisfied that the identity of the fruit can and will be maintained.

Fruit produced in an eradication area (Zone one and two) may be packed in houses located in such eradication area, provided that identity of the fruit is strictly maintained at all times. This is interpreted as meaning that the identity must be so clearly maintained that the Inspector on duty will have no difficulty whatever in satisfying himself that the fruit or any part of it has had its identity maintained from the time of handling through the packing house to the final billing to permissible destination. It may be necessary for the Inspector to require in order to insure such maintenance of identity that the house pack only one class of fruit at one time. The Inspector may require that all fruit of a given class be cleared from the house before fruit of another class is taken in for packing. The packing house may have the option of complying with this requirement or of having the destination privileges of all fruit contained in the house confined to that of the most restricted class of fruit therein.

All fruit produced in an infested area (Zone one) must be sterilized.

All fruit produced in an Eradication Area outside of infested areas (Zone 2) must be sterilized, unless

shipped to points north and east of the Potomac Yards.

Fruit produced outside an eradication area may be shipped unsterilized to any point other than the eighteen Southern and Western States.

Sterilization of Fruit by Refrigeration

Fruit may be sterilized by cooling until the temperature in the approximate center of the fruit reaches 28 degrees F. and holding the fruit at that temperature for five hours; then raising the temperature of the fruit not higher than 30 degrees F. and holding until a total period of five days has elapsed from the time the temperature of the approximate center of fruit reached 28 degrees F. This sterilization must be done under the direct supervision of an Inspector.

EXCEPTION: Eradication area fruit may be packed and shipped unsterilized under ice to approved cold storage houses in the North, for the purpose of sterilization.

Movement of fruit from an eradication area to points in barrier area or West Florida area is prohibited.

Requirements to be Observed by Packing House

FLOORS SHALL BE KEPT FREE from all refuse, viz., paper rubbish of all kinds, culls and refuse from host fruits and vegetables. All packing house machinery must be kept clean and sanitary; no accumulation of dirt or other foreign material shall be allowed to accumulate anywhere around machinery, or in the packing house. When a packing house shuts down for twenty-four hours or more, no host fruits or vegetables shall be allowed to remain in washer, dryer, bins or other machinery.

COVERED AND GALVANIZED GARBAGE CANS (not boxes or barrels) shall be within easy access for the disposal of host fruit and vegetable culls. These shall be emptied and thoroughly cleaned at least once each day.

ALL CULLS OF HOST FRUITS AND VEGETABLES and other refuse on the packing house property must be cleaned up every day.

NO CULLS ARE TO BE MOVED from a house for any other purpose than destruction. All host fruit and vegetable culls and refuse must be destroyed in a manner provided on page 4.

THE CULL CHUTE OR BELT

must deposit fruit and vegetables into a screened or otherwise tightly enclosed compartment which must be thoroughly cleaned and disinfected with kerosene every three days and kept closed except when being emptied. (Floor must be solid.)

CANNING GRADE H O S T FRUITS AND VEGETABLES must be disposed of promptly and not allowed to accumulate in the packing house, except when stored in the coloring room, in the precooler, in sterilizing rooms, when packed, or while passing through the machinery.

UNPACKED HOST FRUITS AND VEGETABLES shall not remain in the packing house for a period longer than 48 hours prior to time of starting disposal thereof by coloring or other packing operation. All such host fruits and vegetables remaining in the packing house in excess of 24 hours must be screened, stored in coloring room, or kept completely covered with tarpaulin.

GROVES AND OTHER PROPERTIES will be approved and certified for movement of host fruits and vegetables therefrom by Inspectors in charge of Districts.

HOST FRUITS AND VEGETABLES moving to a processing plant from a grove or property or packing house under a permit issued for such movement must be actually delivered to the processing plant named on the permit and shall not be diverted, prior to such delivery, for any purpose whatever.

CLEANING OF PICKING BOXES field boxes, ladders, picking sacks, agricultural implements and other grove or orchard appliances, when moved from an eradication area to points without must be under supervision of an Inspector by being cleaned of all dirt, trash and refuse.

STANDARD CONTAINERS. The words "standard containers" as used in Rule 42 0. are to be construed, when applying to containers for citrus fruits, as meaning "Standard Commercial Containers" such as are used by packing houses in making interstate shipments. When pedlars, hucksters, wholesalers and retailers ship or transport citrus fruits interstate they shall use standard commercial containers. While in transit the lid or top of such crates must be kept securely fastened in place.

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Property Certificates For Citrus Fruit Shipments

Dr. Wilmon Newell, Agent and Plant Commissioner, has issued the following letter to all citrus packing houses in the state of Florida:

To All Packers:

Requests for Property Certificates are being made upon us by growers who wish now to make shipments.

In some instances we find it impossible to issue such certificates because of failure of the owners to comply with certain of the regulations. We therefore have prepared a form (copy attached) to indicate briefly to the growers the particular thing which stands in the way of granting a Property Certificate upon any certain property.

All of the State regulations which have a bearing upon the movement of host fruits and vegetables from any particular property are in compliance with the stipulations of Paragraph 1, Regulation 3 of the Federal Quarantine No. 68 (Revised) which read as follows:

"The interstate movement of restricted articles from any part of an infested State will be conditioned on the said State requiring and enforcing the following eradication measures in manner and by method satisfactory to the United States Department of Agriculture, namely:"

Thus there is nothing optional in connection with the granting of Property Certificates. All must understand that compliance with all these provisions is absolutely essential if host fruits and vegetables are to move in interstate commerce.

Whatever you can do to aid in giving your growers a clear understanding of this will be appreciated. It will also be in line with helping yourselves because, as you know, no packing house is permitted to handle host crops from any property for which a Property Certificate has not been issued.

Yours very truly,

Wilmon Newell,

Agent and Plant Commissioner.

P. S. For your convenience we enclose also a memo of those particular state and federal regulations to which reference is made in the notice in question to growers.

Property Certificate

Dear Sir:

The issuance of Property Certificate on your property located at _____ County, Florida, is depend-

ent upon compliance with requirements listed below. The check mark (✓) before the figure indicates cause of delay in issuing the Property Certificate, as our records show that requirements so checked have not been carried out on your property. When such conditions have been complied with we will be pleased to issue a certificate.

1. The cultural conditions in the grove are not such with respect to cover crop, natural growth as to permit of suitable and adequate inspection to determine whether drops are being picked and removed at regular intervals. (S.P.B. Rule 42 D (3)).

2. The drops and windfalls are not being picked up semi-weekly as required by the regulations. (S.P.B. Rule 42 D (1) (a). P.Q.C.A. Regulation 3, Section A, Paragraph (3) (a)).

3. The disposal of drops and windfalls is not according to requirements. (Drops and windfalls are to be collected semi-weekly and buried in a pit. Fruit to be covered with oil and lime and not less than 3 feet of dirt. "Canning grade" drops may be hauled in field crates in covered trucks to canning plants located within the eradication area. (S.P.B. Rule 42 D (1) (a)).

4. All summer fruiting host trees or plants, wild and cultivated, which normally produce fruit susceptible to infestation during the host free period have not been eliminated from your property. Avocado, citrus, mango and palm trees, banana plants and grape vines are excepted. (S.P.B. Rule 42 C (4) P.Q.C.A. Regulation 3, Section A, Paragraph (2)).

5. The bait spray requirements have not been complied with. At least one spraying must have been given before a certificate can be issued. If and when spraying is completed, submit evidence of such spraying to this office. (S.P.B. Rule 42 D (1) (a) P.Q.C.A. Regulation 3, Section A, Paragraph (3) (a)).

1. S.P.B. Rule 42 D (3):

All properties upon which are produced host fruits and vegetables of the Mediterranean fruit fly shall be maintained in

such condition as to permit, upon inspection, the ready discovery of fallen or cull fruits and vegetables.

2. S.P.B. Rule 42 D (1) (a):

FOR HOST FRUITS, such spraying as may be necessary to destroy adult fruit flies; the clean-up of drops and windfalls at semi-weekly intervals during the ripening and harvesting period; the prompt and safe disposal of crop remnants following harvest, and any other requirements necessary in the judgment of the Board to effect eradication of the Mediterranean fruit fly. With respect to the disposal of crop remnants, all such remnants either on the tree, or ground or in other places shall be promptly collected and either destroyed or utilized in manner and by method satisfactory to the Board—such action to be taken on the completion of commercial harvesting of any variety of host fruit irrespective of the termination date for the class of fruit concerned (citrus, etc.).

P.Q.C.A. Regulation 3, Section A,

Paragraph (3) (a):

FOR HOST FRUITS, such spraying as may be necessary in the judgment of the inspector to destroy adult fruit flies; the clean-up of drops and windfalls at semi-weekly intervals during the ripening and harvesting period; the prompt disposal of crop remnants following harvest, and any other requirements necessary in the judgment of the inspector to effect eradication of the Mediterranean fruit fly. With respect to the disposal of crop remnants either on the tree or ground or in other places, shall be promptly collected and either destroyed or utilized in manner and by methods satisfactory to the Department of Agriculture—such action to be taken on the completion of the commercial harvesting of any variety of host fruits irrespective of the termination date for the class of fruit concerned (citrus, etc.),

3. S.P.B. Rule 42 D (1) (a): See 2 above.

S.P.B. Rule 42 N (3):

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Vegetable Planting Regulations

Farmers, truck growers and gardeners in Florida will be glad for the detailed information concerning what vegetables may and what may not be planted, as contained in statement just issued from fruit fly headquarters at Orlando, as follows:

"What is referred to as the eradication area includes the territory under quarantine, including zones formerly designated as zones one and zones two with a small amount of additional area to straighten out the boundary lines.

"Within the boundary of an actually infested property, such as a grove, nursery, farm, garden, yard or other property in which an infestation has been found, a permit must be obtained from the State Plant Board before any host fruit or vegetable may be planted. In addition, any work done on an infested property or plantings of any nature must conform with such practices as are prescribed as necessary to prevent the spread of the Mediterranean fruit fly.

"Planting within the eradication area, except within an infested property, of all non-host vegetables and field crops, may be made without a permit and without any regard to the host-free period.

"Plantings within the eradication area of host vegetables, namely, bush lima, pole lima and broad beans, eggplant, peppers and tomatoes, must be made so as to mature after October 1st and before June 15th. Seed beds may be started at the usual time provided the plantings cannot reach a susceptible stage of maturity before October first, the end of the host-free period.

"Lima beans, broad beans and peppers when for interstate shipment, may be shipped without sterilization, but only to the District of Columbia, Potomac Yard and to Maryland, Pennsylvania and points north and east thereof.

"Tomatoes and eggplant may be shipped without sterilization to all points north and east of the eighteen quarantined states.

"No shipments of host vegetables may be made from within the eradication area to any point in Florida outside the eradication area.

Peppers, lima and broad beans, tomatoes and eggplant grown at points in Florida outside the eradication area may be shipped under per-

mit to any point in the United States outside the eighteen southern and western states which are closed to all Florida host crops.

"Shipments of all host fruits and vegetables wherever grown in Florida may be made to points outside the state only under permits. Such permits may be issued only where state and federal regulations relative to production and handling have been complied with fully.

"Cultural conditions, with respect to cover crop and natural growths, must be such as to permit of suitable and adequate inspection to determine whether drops of all host vegetables are being picked and removed at semiweekly intervals. Drops and windfalls of all host vegetables are to be collected and buried in a pit, then to be covered with oil and lime and not less than three feet of dirt.

"From every property, as a condition to obtaining permits for shipments therefrom, all summer fruiting host trees or plants, wild and cultivated, which normally produce fruit susceptible to infestation during the host-free period, must be removed. (Avocados, citrus, mango and palm trees, banana plants and grape vines are excepted.)

"Non-host vegetables grown anywhere in Florida may be shipped to any other state without restriction, and no permit is required.

"Outside the eradication area in Florida there are no planting restrictions and no host-free period for vegetables is specified at any time of the year.

"The eighteen southern and western states which are quarantined against all host crops from Florida are Arizona, Arkansas, Alabama, California, Georgia, Idaho, Louisiana, Mississippi, Nevada, New Mexico, North Carolina, Oregon, Oklahoma, South Carolina, Texas, Tennessee, Utah and Washington.

"Of all vegetables customarily grown in Florida, only bush lima, pole lima and broad beans, eggplant, peppers and tomatoes are classed as hosts of the fruit fly, and are restricted accordingly."

RAILROADS EXTEND STORAGE IN TRANSIT FOR CITRUS

Railroads continue to manifest their interest in helping the growers and shippers of Florida by providing

storage in transit privileges.

The Growers and Shippers League has just received advice from C. McD. Davis, Freight Traffic Manager of the Atlantic Coast Line, that his company has taken steps to extend storage in transit arrangements on that line to June, 1930.

The League had applied to the Coast Line to extend their storage privileges to assist growers in moving their crops under quarantine conditions. Last season the Atlantic Coast Line published storage in transit rates for storage at points in Florida and Richmond, Va. Due to the quarantine regulations in effect this season requiring sterilizing of citrus fruits originating in the eradication area, except cars destined to points north of the District of Columbia, the storage privileges are more necessary this year than ever before.

The Plant Quarantine and Control Administration, due to the lack of adequate facilities in Florida, have approved of processing citrus not only in Florida but in other designated states. After fruit has been inspected by inspectors of the Administration, and no evidence is found indicating any infestation, permits are issued by the Plant Quarantine and Control Administration for shipment under full refrigeration to storage points where fruit may be sterilized under supervision of government inspectors. The other states besides Florida in which under the present arrangement fruits may be treated pending the development of adequate facilities in Florida are District of Columbia, Kentucky, Missouri, Ohio, Illinois, Massachusetts, New York and Pennsylvania. It is expected other states may be added to this list in which, after proper investigation, the Plant Quarantine and Control Administration will permit fruit to be stored for sterilization after shipment from Florida under permits of the administration.

"An undertaker was run over by an auto and died."

"He didn't make much on that funeral, did he?"

"No, in fact he went in the hole."
—Stevens Stone Mill.

In writing advertisers please mention The Citrus Industry.

Fruit Growers Benefit By Federal Farm Loans

In response to a request of the Senate Committee on Agriculture, Alexander Legge, Chairman of the Federal Farm Board, has submitted the following letter to Senator McNary on loan commitments and monies thus far advanced by the Board:

"Hon. Charles S. McNary,
Chairman, Committee on Agriculture and Forestry.

Dear Mr. Chairman:

"In response to the request of your Committee for information on loans made or authorized by this Board, the following summary is submitted:

"COTTON: To the American Cotton Growers Exchange, on behalf of its thirteen member associations, a commodity loan, the amount of which was estimated by the Exchange to be between \$15,000,000 and \$20,000,000, was granted on August 19. The advances on this loan are to be made from time to time as requested by the various member associations. Of this amount, the only definite request filed to date is \$750,000 from the Georgia Cotton Growers Cooperative Association, which amount was made available through the Intermediate Credit Bank. To date none of this money has been called for.

"The Staple Cotton Growers Cooperative Association applied for a commodity loan of \$6,000,000, which application was approved on September 16. An advance has been called for on this loan to-day for \$500,000, and this amount is being remitted.

"The Staple Cotton Growers Cooperative Association has also applied for \$2,500,000 on a price insurance proposition, on which the Board is now endeavoring to obtain some actuarial estimates.

"In addition to the above commodity and insurance applications, the Arkansas Cotton Growers Cooperative Association applied for a re-organization loan of \$25,000 which was remitted to them on August 17. On September 3 they applied for an additional \$25,000 for the same purpose, which was approved and remitted to them on September 4.

"On September 3, the Tennessee Cotton Growers Cooperative Association requested \$100,000 for re-organization purposes, which was approved by the Board and remitted to them on September 4.

"DAIRY PRODUCTS: Various

creamery and milk associations submitted applications totaling \$6,500,000, and on September 20 the Board tentatively approved \$1,500,000 of this, and the balance is now under consideration. None of this money has yet been called for.

"FRUITS AND VEGETABLES: On September 12 the Board approved a facility loan of \$3,000,000 to the Florida Citrus Exchange. Pending the appraisal of the property and the audit of the company which is now being made, a temporary advance of \$500,000, secured by collateral, was authorized, this \$500,000 to ultimately become a part of the \$3,000,000 facility loan.

"The Michigan Fruit Growers, Inc., also applied for a commodity loan of \$25,000 on Concord grapes. In view of the perishable nature of this commodity and the lack of facilities for storing them even for the short period which they could be carried in storage, this application was rejected.

"On August 16, the Board approved a commodity loan to the Sun Maid Raisin Growers of California, the maximum amount not to exceed \$4,500,000, this being in connection with the California banking group who are to advance an equal amount.

"The Sun Maid Raisin Growers of California have also applied for a facility loan, estimated in the amount of \$4,000,000, which application is now under consideration.

"On September 3, the Board approved a commodity loan to the Federal Grape Corporation of California, of \$250,000, with the understanding that this might be increased 50 percent if the amount was required. As in the case of the loan to the Sun Maid Raisin Growers, the local bankers are to advance a like amount. Since this authorization, by an agreement between the Federal Grape Corporation and the Sun Maid Raisin Growers, the amount of this loan is also to be applied to raisins.

"The Fruit Industries, Inc., of California, applied for a loan of \$1,500,000. Of this amount a loan of \$1,000,000 was approved by the Board on September 4. This is a facility loan.

"The Cooperative Grange League Federation of New York State applied for a facility loan of \$50,000, which was granted on September 7.

"The Michigan Potato Growers Ex-

change applied for a facility loan of \$15,000, and a commodity loan of \$110,000, which are now being investigated.

"So far none of the fruit and vegetable growers have called for any advances on the loans granted.

"GRAIN: On September 3 the Board approved a commodity loan to all the wheat cooperatives, of which it was estimated \$10,000,000 would be called for. So far only one specific application has been filed, by the North Dakota-Montana Wheat Growers in the amount of \$500,000. This application was approved on September 18. Under date of September 26 the first money called for, in the amount of \$36,600 under this loan was remitted.

"In addition to the above, the Board is rather definitely committed to substantial advances to the National Grain Corporation now being organized for the financing of both facilities and the commodity.

"HONEY: The Mountain States Honey Producers Association applied for a commodity loan of \$250,000, of which amount \$135,000 was approved September 19. No advances have been called for under this loan.

"We also have under investigation an application from the same cooperative (Mountain States Honey Producers) asking for a facility loan of \$15,000.

"LIVESTOCK: Various cooperative livestock associations have applied for commodity loans estimated in the amount of \$10,000,000. The full amount was approved September 6. None of the money has yet been called for.

"RICE: The Arkansas Rice Growers Association applied for a commodity loan estimated at \$240,000, which was approved September 10.

"On September 10 the Board tentatively approved a facility loan to the Arkansas Rice Growers Association, estimated at \$400,000, pending an appraisal of the property which is now being made.

"The Rice Growers Association of California applied for a commodity loan of \$300,000, of which amount the Board approved \$230,000 on September 10.

"No advances have been called for on any of these rice loans.

"SEED: The Egyptian Seed Growers Exchange applied for a commodity loan of \$100,000, which was approved September 10.

Continued on page 32

The Control of Rootknot In Seedbeds

By J. R. Watson, Entomologist, Florida Experiment Station

It is important that seedbeds, especially those made up in the early fall, be free of root-knot nematodes. Newly cleared land is usually free of these nematodes but such land is not always available. Infested land may be freed by the following method.

If young plants can be carried through until cooler weather in a nematode-free bed, they may make satisfactory growth, even if set in a field with considerable nematodes, after cool weather has checked the growth of the worms. Furthermore, it is particularly important that a plant be kept free from nematodes in its early life. Growth is then slower and the root system smaller than at any other time, and an infestation that would not disastrously affect a larger plant, might kill the young plant. Moreover, the shorter the time a plant stands in nematode-infested land the fewer will be the generations of worms dwelling on it and, hence, the lighter the infestation.

In order to produce plants reasonably free of nematodes, as in the case of plants to be set in a field already somewhat infested, it is generally recommended that 600 to 800 pounds of sodium cyanide and 900 to 1,200 pounds of ammonium sulphate to the acre be used to treat the plant bed. If nematodes appear at all in such seed-beds, they will be in isolated spots, from which plants can be rejected at planting time. If, on the other hand, the desire is for plants that can be depended upon to be absolutely free, as for setting in uninfested ground, application of at least 1,200 pounds cyanide and 1,800 pounds ammonium sulphate to the acre should be made. The lighter the soil the smaller the amount required.

Method of Application

The proper quantity of sodium cyanide is first dissolved in water and the solution is then poured over the ground, which should have been previously plowed. Care must be taken to get an even distribution of the liquid. Irrigation water is then applied and the soil soaked to a depth of 18 inches or more. The ammonium sulphate, one and a half times the weight of the cyanide, is then dissolved in water which also is poured evenly over the ground; a little irrigation water is applied again, just enough to carry the sulphate down.

It is important that the sulphate be applied as promptly as possible after the cyanide, certainly the same day. The killing of the nematodes is accomplished by hydrocyanic acid gas given off by the decomposition of the cyanide. Ammonium sulphate hastens decomposition by reacting with the cyanide. Hence, it is important that the sulphate be applied soon after the cyanide. The two substances must not, however be mixed before applying. It is important that reaction between these two materials take place in the soil.

The material should be placed in a sprinkling can to which water is then added. When all is dissolved (it dissolves readily) the solution can be sprinkled evenly over the ground. There is no need of touching it with the hands.

The cost of 600 pounds of cyanide and 900 pounds ammonium sulphate at present prices is about \$200. While this cost is high, the treatment is well worth while for seedbeds, particularly of such plants as celery and lettuce, peppers and other fall crops started in late summer or early fall when nematodes are most active.

This treatment leaves the soil very rich in nitrogen and the value of the material as a fertilizer should be deducted when figuring the cost of the treatment. Indeed, on some seedbeds, such as celery, larger amounts of nitrogen to the acre are regularly applied than is contained in 600 pounds of cyanide and 900 pounds of ammonium sulphate. Ordinarily it will be necessary for the grower to apply only potash and phosphoric acid after treatment.

Another good chemical for killing nematodes is formaldehyde. Although somewhat cheaper than the sodium cyanide and ammonium sulphate, it does not, like the latter treatment, fertilize the soil. However it has the advantage that it also kills fungi which may attack the young plants. One part of the commercial product is dissolved in 50 parts of water and this liquid is applied to the soil at the rate of one quart per square foot.

Cautions

Persons applying sodium cyanide must bear in mind that this material is extremely poisonous. The balls (a convenient form is one in which the material is sold in ounce "eggs") can be handled with the bare hands, if

the skin is dry and there are no abrasions. It is always safer to use rubber gloves or a pair of forceps or tongs in handling. The solution should not be allowed to come in contact with the skin.

The fumes are very poisonous to breathe, but there is little danger from this in the open air. In a greenhouse or other inclosed space care must be taken to avoid inhaling much of the fumes.

RAINS RETARD RIPENING OF TEXAS FRUIT

Tuesday, October 2, witnessed the official opening date of the citrus season in the Valley, the first fruit to move in carload lots going out from La Feria by White & Lawler, Inc., A truck load of Duncans went out from Mission from the orchard of Mrs. V. Hoffman and were consigned to a produce firm in San Antonio, says the Mission, Texas, Times of October 4. They were shipped in baskets and averaged 70 size. The shipment was made by G. C. Allen.

Exchange fruit is not expected to start moving before next week, although picking is under way. Much fruit is in the coloring rooms, being treated in preparation for shipment to what promises to be a very good market.

Rains a week or two ago have retarded the ripening of the fruit. According to A. R. Sandlin, marketing expert of the Exchange, these rains started fruit to growing. In an interview with The Times Mr. Sandlin had this to say:

"Exchange officials as well as its members are somewhat disappointed in not getting started in the opening of the shipping season. This situation was probably brought about by the recent rains, which started the sap flowing and considerable new growth. Some blooming has been noticed on the trees. This condition naturally started the fruit to growing again and retarded maturity. Hence the delay in the fruit passing the required test. We have advised our trade of this condition, and until the new flush of growth has ceased and new wood begins to harden the solids or sugar in the fruit will more than likely be deficient, and shipments will be quite spotted and light for several days.

Continued on page 27

Newell Reports On Fly Situation

A summary of the status of the fruit fly eradication campaign is contained in statement issued here by Dr. Wilmon Newell, Plant Commissioner of the State Plant Board of Florida. In what may be termed a report to the people of Florida, Dr. Newell says:

"The work of eradication has progressed most satisfactorily. Progress is shown by the fact that the number of infestations located scaled downward steadily after May, so that although a total of nine hundred and ninety-nine infested properties in twenty counties were located and charted, only eight of these were found during August, and we passed through the entire month of September and have gone thus far into October without discovering a single new infestation.

"Florida's citrus crop is being shipped; and all of it will go to market if the fly does not manifest itself in the shipping areas. Also all Florida vegetable crops not classed as hosts of the fly now have an unrestricted market. The classification of host vegetables is reduced to egg plants, peppers, lima beans and tomatoes; and there are numerous markets open to these.

"The shipping privileges now open to Florida host fruits and vegetables are due to the success of the eradication work done to date. Had not so remarkable a reduction in the fly population been accomplished during the summer it is certain that about six million boxes of citrus fruit in the so-called 'infested zones' would not have been allowed shipment; and thus would have been a total loss to the growers. Similarly peppers, egg plant and tomatoes would have had extremely restricted markets, if any at all.

"The threat to Florida's economic welfare through the presence here of the Mediterranean fruit fly in large numbers was very great. Other states do not propose allowing this fly to reach them if it is possible to prevent. Florida growers may well be thankful that the interstate quarantines are being administered by a paternal federal government rather than by individual states. Until the fruit fly has been completely eradicated from Florida quarantines will continue in one form or another. It is therefore of manifest advantage to Florida that the job of eradica-

tion be accomplished fully and at the earliest possible date. Until then, any withdrawal of federal quarantines would be followed immediately by the placing of quarantines or embargoes of individual states, acting in accordance with their rights and powers.

"Florida has otherwise ample reason for wishing to accomplish complete eradication of the fly. Whether its capacity for destruction has been over-estimated or not, the fact that in some groves in central Florida last spring it caused practically a one hundred per cent destruction of the crop is significant; and it is certain its presence in Florida would very greatly increase the cost of producing marketable fruit. There is likewise food for thought in the fact that should eradication fail, the federal government will be compelled to admit to the United States fruits and vegetables from countries where the Mediterranean fruit fly occurs. Oranges and grapes from Spain, Italy and Palestine, oranges and grapefruit from South Africa and elsewhere must be admitted to compete with Florida products in American markets.

"Continued successful prosecution of eradication measures leading ultimately to the entire elimination of the Mediterranean fruit fly from the state should undoubtedly permit of steadily bettering economic conditions in Florida. The fly has not yet gone. It has not 'disappeared'. It is true that the eradication work to date apparently has been successful beyond the most optimistic expectations of a short time ago; but even so the fly population has not yet been brought to a point where it may be disregarded.

"No thinking man who witnessed the application of cyanide dust to test trees in certain groves last spring, resulting in definitely locating an average of over five hundred flies to the tree, is willing to believe that all the flies are gone. The inspectors are searching for tiny insects, so difficult to find that an infestation may not be discovered until insects in a particular vicinity have increased to hundreds. Ripening of the citrus crop will provide material wherein fruit flies can breed and increase. Every one knows that work already done against the fly has been most effective, but the true measures of its

effectiveness must be measured by the number and extent of such infestations as may be found between now and next spring.

"Our progress has been excellent. The enemy is on the run. Now is the time to redouble our eradication efforts and complete the job.

"The people of Florida have just cause to congratulate themselves upon the progress which has been made in this fight, in which they themselves have taken such an important and vital part. However, this is no time for self-delusion. The danger is greatly reduced. It is minimized. But the time of danger is not over; the fight is not yet finished. Instead of relaxing efforts, now is the time to follow up the advantage gained with all our might; and proceed to finish the job. We also must realize that to finish the job will require the continued cooperation of all citizens. It will entail sacrifices; and it will require work—work on the part of private citizens as well as those officially employed. The price of victory is not too high. Complete victory over the Mediterranean fruit fly means such vast economic advantage to Florida, as contrasted with what failure of eradication must mean, that it is worthy of the best efforts and the close cooperation of every man, woman and child in the state."

NATIONAL CONTEST FOR

POULTRY CLUB MEMBERS

Another goal for 4-H club members to work for has just been announced by the Quaker Oats Co., of Chicago, in offering a free trip to the International Club Congress in Chicago in 1930 for the club member in each state making the best record in poultry production. In addition, national winners will be selected from the state winners, and two national prizes of \$300 and \$200 will be awarded.

The contest is being conducted to stimulate interest in poultry clubs throughout the country, and will be supervised by 4-H club leaders in the states. County agents will conduct the contest in their counties and will supervise the care of the flocks. To be eligible for the state prizes a contestant must have at least 50 birds.

The contest began September 1st 1929 and will continue for one year.

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GROVE CALENDAR FOR OCTOBER

Timely Suggestions for Grove Work During the Present Month

If clean-up spray was not applied in September it should be given this month. Wash out sprayer thoroughly after using.

Now is the time to think about and prepare for your fumigation operations this fall and winter.

If cover crop is heavy, mow and allow it to lie where cut (this controls pumpkin bugs).

Make preparations for harvesting, but do not harvest green fruit.

Pick up and burn all twigs under pecan trees, which have been cut off by girdlers.

CITRUS SEASON OPENS FAVORABLY

Early shipments of grapefruit, which started immediately after the first of September, met with a favorable reception in all of the major markets of the country. From the very start, prices ruled very satisfactory from the grower's standpoint, auction sales averaging \$6.50 and better, with some of the fancy grades selling up to \$9.50. At the beginning of October, there was a tendency on the part of buyers to

hold off, awaiting heavier shipments in the hope that lower prices might prevail. At the beginning of October, auction prices generally were off about \$1.00 from the high prices prevailing early in September, but the better grades were finding a ready market at good figures.

Up to October 7, 843 cars of grapefruit had been moved from Florida packing houses. For the most part, this fruit was well advanced in maturity over fruit shipped at the same time last year. Save in a very few instances, there has been but little complaint of unfit fruit being shipped or of attempts to evade the green fruit inspection law. The inspectors are on the lookout for any such attempted evasions, and it is declared that any violations of the law will be speedily and strongly prosecuted.

Both the Isle of Pines and Porto Rico had abundant supplies of grapefruit on the Eastern markets during September and these supplies are still coming forward during October. Texas, on the other hand, had no fruit in any of the markets during September, shipments being withheld until after October first. While the Florida fruit is far in advance of last season from a maturity standpoint, the Texas fruit is backward, owing to unseasonable rains which have kept the fruit growing and retarded ripening. Texas expects to have 5,000 cars of grapefruit to ship this season, as against about half that quantity last year. The shipment of grapefruit from Florida during September was far in excess of the quantity shipped during the same period a year ago.

But while Florida grapefruit shipments for September were far in advance of the average seasonal shipment, the movement of oranges was practically nil. Up to October 7, only four cars of oranges had left the state. At this writing, however, the movement of Parson Browns is setting in and from now on such shipments may be expected to increase rapidly. This variety is well advanced in maturity, is for the most part sweet and palatable, and when properly colored should meet with a ready demand at good prices. The few cars so far shipped would seem to bear out this conclusion. Most packers, however, are inclined to hold back the movement of oranges in any considerable quantity until after the first of November, and it is not believed that shipments will reach the peak until after that date.

Packing house officials and others who have given careful study to the situation, look forward to a season of good prices, provided no effort is made to stampede the market by an oversupply of offerings. The citrus crop of the country as a whole is exceedingly short, and with proper control of distribution over the season, there is every reason to believe that prices will remain at satisfactory levels throughout.

THE FLY SITUATION

Mediterranean fruit fly
The situation as regards the Mediterranean fruit fly continues to improve. Indeed, so favorable has been the situation during the past few weeks, that some have been inclined to believe that the fly has been definitely whipped, that there no longer is danger of a renewal of its

activities. While it is to be hoped that this spirit of optimism may be realized, it is the part of wisdom to continue the active fight against the fly until it is definitely known that the last fly has been killed and the most remote danger of reinfestation has been removed.

Florida, with the assistance of the federal government, has made a wonderful fight against the fly. In six months Florida has accomplished more toward eradication of the fly than any other country or any other section has accomplished in all the years since the fly first became known to fruit growers of the sub-tropical countries. But neither Florida nor the federal government can be content with what has already been done. The fight must be waged to a finish, without let up or intermission, until the last possibility of danger is removed.

In the members of the State Plant Board and the federal authorities co-operating with them, we have a set of men as fully capable of handling the situation intelligently and effectively as any set of men in the world. Right now, they are probably better equipped for the work required than any others who could possibly be assembled for the task. In addition to their scientific knowledge, they have the experience of the past six months in actual contact with the fly in the field. They know the requirements of the job and have the will to perform. They should continue to have the united and unqualified support of the government in carrying out the plans for the prevention of a recurrence of the recent infestations.

Congress, it is believed, will look with favor upon the recommendation of Secretary Hyde for an appropriation of \$26,000,000 to continue the fight to the end. Such an appropriation should insure the successful outcome of the campaign for eradication. Lack of such appropriation might well mean a renewal of the activities of the fly which would nullify the good work already done. With proper support at the hands of congress and the public, the state and federal authorities will surely win. This support should be forthcoming without question.

AN APPRECIATION

Florida citrus growers owe a debt of gratitude to J. A. Griffin, president of the Florida Citrus Growers Clearing House Association, Peter O. Knight, of Tampa, Senators Fletcher and Trammell, and Congressmen Herbert J. Drane and Ruth Bryan Owen, for their efforts in securing more favorable regulations for the shipment of this season's citrus crop and their work in behalf of federal appropriations for further eradication work and for the reimbursement of growers whose crops have been destroyed in the fight against the fly. These loyal Floridians have been tireless in their work for Florida citrus growers and the state.

LITTLE FRUIT LOSS FROM WIND

Florida citrus growers suffered but little from the high winds which skirted the southeastern, southern and southwestern borders of the state during the last days of September. Some fruit was blown from the trees on the Lower East

Coast and in DeSoto and Lee counties in the West Coast section, but aside from this loss, which was small, the only damage sustained by growers was from thorn pricks and scars.

For a time it was feared that the storm might cross the peninsula through the citrus sections, and growers were greatly relieved when it became known that the wind was skirting the border of the state through the Florida straits and far out at sea up the Gulf.

HIGH IODINE CONTENT OF GRAPEFRUIT

Additional incentive to the daily use of grapefruit is found in the latest discovery of its high percentage of iodine, invaluable in the treatment and prevention of goitre. Speaking of recent tests, the Bradenton Herald says:

"The newest analyses made of canned Manatee county grapefruit shows an iodine content of 423 part per billion, according to announcement made by C. E. Street, chairman of the chamber of commerce iodine committee, which has been active in bringing to the attention of the public the value of iodine in Florida vegetables as a preventive or cure for goitre. The analyses referred to were made by the Tampa Terminals company at its own expense.

"Results of the analyses are deeply significant and of far reaching effect since they prove conclusively that the medicinal value of these fruits and vegetables is not lost through the canning process, a mooted question until this test was made. However the result of the test definitely removes the last obstacle in the path of the committee's plans and will enable these gentlemen to go into the October 24 and 25 state-wide conference with a definite program.

"The value of iodine as a preventive for goitre is forcefully shown in numerous medical pamphlets and magazines that have been made available by the committee. Three noted scientists, Norman D. Jarvis, M. S., Ray W. Clough, Ph. D., and Ernest D. Clark, Ph. D., collaborating on an article in the Journal of the American Medical association, published in May, 1926, are agreed on the following.

"It is now generally believed that iodine deficiency is the immediate cause of simple goitre and that this disease is readily combatted by a preventive treatment that supplies the amount of iodine necessary for the normal functioning of the thyroid. This may be accomplished by increasing the iodine in the diet. . . ."

Reading elsewhere in the same article this is found:

"J. F. McClendon and J. C. Hathaway found that foods produced in goitrous regions contain less iodine than those produced in nongoitrous regions. Certain facts in support of the hypothesis that goitre is an iodine deficiency disease stands out in the observations of Keith on goitre in the Pemberton valley of British Columbia."

"In this connection one finds a convincing example of conditions as they exist in the Great Lakes region, a goitrous community, and Florida which is nongoitrous. 32 per cent of 12,361 boys, and 67 per cent of 13,584 girls in Grand Rapids, Mich., schools showed goitrous infection. Against this only 4 out of 2,800 students in Manatee county schools showed this infection.

The Canadian Citrus Fruit Market

Bureau of Agricultural Economics, Washington

Canada provides the principal foreign market for American oranges and lemons and is second only to the United Kingdom as an export outlet for American grapefruit. Annual imports of citrus fruit into Canada from all sources during the four years 1925-26 to 1928-29 (fiscal year April 1 to March 31) averaged 2,200,000 boxes of oranges, 374,000 boxes of lemons and 274,000 boxes of grapefruit. The proportion supplied by the United States during that period works out as follows: Grapefruit 96 per cent, oranges 94 per cent, and lemons 71 per cent. Canada also imports small quantities of grapefruit from Jamaica and Cuba and small quantities of oranges from Japan, Mexico and Spain. Considerable quantities of lemons, however, are imported from Sicily.

The per capita consumption of citrus fruit in Canada is still considerably below that in the United States. Grapefruit consumption in Canada during the past four years averaged only two pounds per capita as against five pounds in the United States. The Canadian consumption of oranges averaged 16 pounds as against 21 pounds in the United States, and lemons 3 pounds against 5 pounds in the United States. Over three-fifths of the total population of Canada, however, is concentrated mainly in the highly industrialized areas extending along the lower lakes and the St. Lawrence River. The actual per capita consumption in this relatively small area is no doubt somewhat higher than the statistical figure for all of Canada.

Oranges

The United States during the past four years has been the source of more than 94 per cent of the oranges imported into Canada. Over 50 per cent of the American oranges imported into Canada are brought in through the customs ports of Ontario and Quebec. Mandarin oranges from Japan have been a feature of the Canadian market at Christmas time for many years. Annual imports from Japan during this four-year period averaged 103,000 boxes or approximately 4.8 per cent of the total. The Japanese fruit comes into Canada through the port of Vancouver. Occasionally Mexican oranges are seen on the market. Small quantities are also imported from Jamaica,

Spain and Palestine. Orange growers in South Africa and Australia have been looking to the Canadian market as a possible outlet for their increasing production, but the lack of adequate transportation facilities thus far has prevented competition from these sources.

Lemons

Only about 71 per cent of the lemons imported into Canada come from the United States. Sicily supplies practically all of the balance. The average invoice value of the Italian lemons imported into Canada during 1928-29 works out at \$4.14 per case while that of American lemons was \$4.69 per case. Transportation costs have tended to divide the Canadian lemon market into two sections. It is difficult to dispose of Sicilian lemons in the markets of western Canada in competition with California fruit because of the expensive rail haul from New York or eastern Canadian points to the Prairie Provinces. Most of the Sicilian lemons imported into Canada for that reason are marketed in Montreal, Toronto, Hamilton, Ottawa, Quebec and London. The western markets, such as Calgary, Winnipeg, Regina and Edmonton, carry practically no lemons other than those from California. While the large cities in Quebec and Ontario take considerable quantities of California lemons the statistics by customs districts show that almost half of the California lemons shipped into Canada are sent to the Prairie Provinces and British Columbia.

The railway freight rate on lemons from Los Angeles to Montreal is \$1.50 per 100 pounds. The rate from Palermo to Montreal on the other hand works out at \$1.30 per 100 pounds (61.9 cents from Palermo to New York and 69 cents from New York to Montreal). This makes a difference in freight rates of 92 cents per 100 pounds in favor of the California shipper. These rates are on full carload shipments.

The bulk of the Canadian imports of Italian lemons come in from April to August. Most of the fruit is landed at American ports and is transhipped into Canada because of the lack of transportation facilities connecting the Canadian and the Sicilian ports. Some Italian lemons are handled via British ports. These usually go into Canada via the St. Law-

rence River before to close of navigation on that water route. The Canadian price on the bulk of Italian lemons is the New York auction price plus the cost of transportation to Canadian markets and middlemen's profits.

Grapefruit

There has been a gradual expansion in the Canadian market for American grapefruit during the past four years. Imports from the United States in 1928-29 amounted to 285,000 boxes or 97.2 per cent of the total as compared with 252,000 boxes or 94.6 per cent of the total in 1925-26. Jamaican grapefruit is practically the only other grapefruit offered on the Canadian market. Strenuous efforts have been made by Jamaican interests to secure a larger proportion of the Canadian grapefruit trade but the Canadian imports from that source have declined steadily due largely to the fact that American grapefruit is of much better quality. Lack of adequate transportation facilities has also been a factor working against the Jamaican shipper but this has now been remedied by the recent establishment of direct steamship service between Canadian and British West Indies ports. The Canadian imports of grapefruit from Jamaica have declined steadily from 12,000 boxes in 1925-26 to 5,000 boxes in 1928-29. With the present shipping facilities, however, together with the special tariff preference which fruit from Jamaica enjoys in the Canadian market, Jamaican exporters may be expected to secure a larger part of the Canadian grapefruit trade providing they can compete with Florida in price, quality and service.

Tariffs

Oranges and lemons enter Canada free of duty. Grapefruit, however, according to Tariff Item 101 (a) is dutiable at 50 cents per 100 pounds British Preferential and at \$1.00 Intermediate and \$1.00 General. The British Preferential rate of course applies only to grapefruit coming from countries within the British Empire. The Intermediate rate applies to countries with which Canada has special treaty arrangements, while the general rate applies to all other countries. American grapefruit takes the General rate. Under Item 101

Continued on page 22

California Subtropical Horticulture Summer Session Establishes Record

One Florida Student in Attendance. International Society Organized

With a registration of 59 students the 1929 Summer Session in Subtropical Horticulture held at the Citrus Experiment Station at Riverside, California, established a record as the largest attended and most successful yet held, according to a recent communication from Professor Robert W. Hodgson of the University of California. Professor Hodgson who, as head of the Division of Subtropical Horticulture of the California College of Agriculture, has charge of the session, is well known in Florida citrus circles through his annual visits to this state to judge at the South Florida Fair.

Students in attendance represented twelve foreign countries; Arabia, Czecho-Slovakia, Egypt, Germany, Haiti, India, Iraq, Palestine, Russia, South Africa, Syria, and Turkey and seven states in addition to California; Arizona, Florida, Idaho, Kansas, Maryland, Oregon and Texas. Florida was represented for the first time in the history of the Summer Sessions at Riverside in the person of Leonard R. Toy, a graduate of the College of Agriculture at Gainesville and later associated with W. J. Krome of Homestead in the Coral Reef Nurseries. Of the 59 students 38, or nearly two-thirds came from other states or from institutions other than the University of California, and 24 were graduate students.

The outstanding feature of the session which invariably causes the greatest comment on the part of the students, according to Professor Hodgson, is the way in which theory and practice are combined in the courses given. The forenoons are devoted to lectures in which the theoretical considerations are presented and the results of investigational work summarized. The afternoons are spent in laboratory exercises, most of which are in the field,—in experimental or commercial orchards, or nurseries. Saturdays are spent in field trips which cover most of the fruit districts of southern California.

Owing to the limited facilities at the Citrus Experiment Station, there being accommodations for only 60 students, Professor Hodgson states that in the future it will probably be

necessary to limit the enrollment in several of the courses for which reason he suggests that students planning to attend the 1930 session may find it advisable to apply for admission and enrollment some months in advance of the opening date, which is approximately July 1. Persons interested in attending the 1930 session are asked to communicate with the Division of Subtropical Horticulture, 339 Hilgard Hall, Berkeley, California. The courses listed to be given include Citriculture, Subtropicals of Major Importance other than Citrus, Insect Enemies of Subtropical Fruits, and Subtropical Fruit Diseases.

Among the outstanding student body activities of the 1929 Session was the formation of an international organization of students in the field of subtropical horticulture known as the Society of Subtropical Horticulturists, the alpha or mother chapter of which will be confined to the University of California Summer Sessions in Subtropical Horticulture. It is expected that within the near future daughter chapters will be formed in Arizona, Texas, Palestine, Egypt, and South Africa, — these states or countries having contributed largely to registration in past summer sessions. The primary objects of the organization will be to preserve contact between students attending the Riverside summer sessions and to promote the advancement of subtropical horticulture along scientific lines. A handsome membership certificate and a beautiful symbolic key were adopted. The officers of the society as selected for the coming year are as follows: President, H. B. Grahap, Pala, California; Vice-president, Paul L. Guest, La Villa, Texas; Councilor, Professor Robert W. Hodgson; and Secretary Treasurer, B. S. Bajwa, graduate student from India.

STERILIZING SATISFACTORY

Orlando, Oct. 12.—Fruit fly eradication headquarters officials today expressed satisfaction with experiments in a new method for sterilizing citrus fruits to be shipped from

what were formerly designated as infested areas.

The officials today cited the case of a carload of grapefruit picked in the vicinity of Cocoa Sept. 28, put through a coloring process then sterilized at 110 degrees fahrenheit for eight hours. The fruit was packed and loaded Oct. 2, then precooled to 50 degrees and shipped Oct. 3, under standard refrigeration. Because of a truckers strike in New York the car was held at Jersey City for several days and sold on the New York fruit market Oct. 9.

Reports of the sale showed that first grapefruit sold for \$7.90 a box. Russets \$6.90 a box; second grade \$5.95 a box; third grade \$5 a box. The prices were reported as being a shade higher than those obtained for two other carloads of grapefruit coming from outside the eradication area, which had not been submitted to the sterilization process. The three cars were handled simultaneously in the same sale by the same sales agency.

The sterilization process was conducted by a Florida shipping concern in cooperation with government experts who were investigating the heat sterilization plan. The car was the second to move in this manner from the packing house. The first one was sold in New York, Sept. 23.

Eradication officials believed that the sterilization method kills organisms which ordinarily cause decay in citrus fruits. Reports were that the sterilized shipments arrived on the market with practically no decay.

YOTHERS TO HONOLULU

W. W. Yothers, who has had charge of investigation work in Florida laboratories with headquarters at Orlando, left Sunday, October 3, for Honolulu, where he will be in charge of work for the department of agriculture in operations against the Mediterranean fruit fly. Mr. Yothers will attempt to determine the extremes of temperature which mean death to the fly.

In writing advertisers please mention The Citrus Industry.

**SUMMER COVER CROP
SHOULD BE REMOVED
FROM SATSUMA GROVE**

(over page)
Summer cover crops play an important part in a satsuma grove, but they should not be left standing after the end of the rainy season as they use up much moisture which will be needed by the trees. This is the summary of the cover crop situation in satsuma groves at this season, as outlined by J. Lee Smith, district extension agent.

In pointing out the necessity for removing the cover crop about the first of September Mr. Smith does not mean to imply that the summer cover crop is not a good thing. He merely means that it has already served the purpose for which it was planted, and should be removed at once before the fall droughts begin.

In summarizing the advantages of a leguminous cover crop for the grove, Mr. Smith says that it has four distinct values. It will add much-needed vegetable matter, which when turned into the soil will serve as a home for friendly bacteria and increase the water-holding capacity of the soil. It will serve as a cover for the land and protect it from packing and washing. It will act as a trap to catch the plant food that is made available in the soil. It will trap nitrogen from the air and add it to the soil to be taken up and utilized by the trees.

If it is planted early, the cover crop will have reached its maximum growth by the end of the rainy season, Mr. Smith continues. There are two ways of removing it, either of which is satisfactory. Some growers prefer to mow the crop and let it lie on the surface while others disc it into the ground.

It is the practice of some growers to mulch the trees during the fall with part of the vegetation. This is all right provided this material is not pulled up against the tree and then covered with dirt, in which case white ants may attack the trees.

When a disc is used in the satsuma grove care should be exercised to see that no roots from the trees are cut off. The trees will need all of their roots during the fall and winter.

A winter cover crop is very desirable for the satsuma grove. Oats, rye, vetch or Austrian peas can be sown in October or November and turned under the following spring.

This is the second of a series of three articles on the care of satsuma groves by Mr. Smith.

In writing advertisers please mention The Citrus Industry.

Citrus fruit industry & trade - laws & regulations
QUARANTINE RULES STILL

FURTHER RELAXED

From Washington on Saturday, October 12, came the announcement of still further relaxation of the quarantine rules governing the shipment of citrus fruits. All citrus territory, save eight small areas in as many counties, are affected by the new ruling.

The modification was made effective upon the condition that fruit moving from the released areas shall be destined for points northeast of Potomac yards, Virginia. Under the order the state plant board of Florida was authorized to release all areas hitherto designated as infested with the fly except those in which infestations have been determined subsequent to July 31.

The eight points still classified as infested are located in the following counties, one area being situated in each county: Citrus, Lake, Marion, Putnam, Pasco, Hillsborough, Flagler and St. Johns. Department officials said the infested sections were approximately two miles in diameter, but that more specific locations of them could not be given.

Might Be Released Soon

These areas will continue under quarantine because evidence of the pest has been found in them since Aug. 1. Officials stressed, however, that no flies have been found in any part of Florida since Aug. 27, and indicated that these eight areas might soon be released from the quarantine, which requires sterilization of all fruit, regardless of its destination.

Other requirements of the quarantine remain unchanged. These include the sterilization of fruit produced in the eradication area as a whole unless it is destined for points north of Potomac yards. No Florida host fruits or vegetables, sterilized or unsterilized, are permitted to be transported directly or indirectly into any of the 18 southern and western states listed in the quarantine.

Awaits Test In April

Dr. C. L. Marlatt chief of the plant quarantine and control administration, said no conclusion could be reached on whether the fly had been stamped out until next April.

"This is the end of the rainy season in which flies, the Mediterranean fly, as well as the domestic ones, are killed off," he said. "House flies come back. It is possible that the fruit fly will come back. We hope that it will not but we must wait and see."

BLUE GOOSE NEWS

Monthly News of American Fruit Growers Inc.



Edited by The Growers Service Department

VOLUME 3.—NO. 11

ORLANDO, FLORIDA, OCTOBER, 1929

PAGE 1

CHAIN BOOST DEMAND FOR ADVERTISED GOODS

The rapid and progressive development of chain stores or affiliated purchasing groups has been the outstanding feature of commercial changes noticeable in this country within the last few years. Not a little alarm over the situation presented through these vast aggregations of buying power has been expressed in some quarters; but those in control of thoroughly established, trademarked goods are finding these same groups not at all inimical to the interests of the producers.

Price is, of course, a first consideration of these groups in making purchases. Because of their tremendous buying power they may at times be in a position practically to set their own figures at which they propose to purchase certain items; and small sellers may, it is alleged, find themselves powerless to do other than accept.

However, the large chains or buying groups are first class merchandisers before anything else. Rapid turnover is with them a no less consideration than is price. Tabulated experience has shown that quickly moving stock may yield a higher net profit to the modern merchant than slower moving stock even when handled upon a considerably thinner margin.

Therefore the chains and the associated buying groups are more greatly interested in steady and reliable supplies of fast-moving advertised goods, for which there is always a ready waiting consumer demand, than in haphazard occasional supplies of those articles for which demand must be built. There is likewise the consideration that merchandise, like persons, is known by the company it keeps; and the large groups find it a big drawing card to be able to impress the public that they are handling the better brands of widely known products. Confidence therefore has replaced alarm among those who now have had sev-

LOCATE EVE EATING BLUE GOOSE FRUIT

If Eve was as good looking as her photograph appearing recently in Fox Movietone-News, the Garden of Eden must have been a really wonderful place in which to live.

Eve in this instance was Miss Verda Cummings, trained nurse formerly of Portland, Oregon, the snake was played by a big bull snake in person, and the apple was likewise played in person by a big red apple bearing the Blue Goose identification. The Garden of Eden was located in the great King David apple orchard of the American Fruit Growers Inc. on Sunnyslope, outside Wenatchee Washington.

A truck carrying twenty thousand dollars worth of movie and sound equipment, manned by experts of Fox Movietone-News, recorded the sights and sounds, for in addition to Eve, the snake and the apple there were likewise present and participating, a large number of good looking girls recruited from the Wenatchee packing house of the American Fruit Growers Inc. who armed with picking buckets and ladders went through the motions of picking apples, the while singing "In the Shade of the Old Apple Tree" in this modernized and improved Garden of Eden.

This was no advertising stunt, but simply the movie men's idea of an interesting bit to include in the Movietone News for the entertainment of audiences all over the country. The selection of the American Fruit Growers property and what followed was only a natural consequence of the fact that "everybody knows Blue Goose".

eral years experience selling their advertised goods to the big buying units. Experience has demonstrated that instead these buying groups interposing a barrier which might interfere with the successful distribution of widely advertised articles, the great buying units actually are pro-

Continued on page 2

PROMINENT BRITONS ARE VISITORS IN FLORIDA

Among the most interesting visitors to Florida recently were Mr. John Colyer of London, Mr. George Webb of Glasgow and Mr. Percy Pask of Liverpool, who are the controlling factors in the greatest fruit and vegetable handling organization in the British Isles.

Messrs. Colyer and Webb have been in Florida previously, but it was Mr. Pask's first visit not only to Florida but to the United States. For more than a week these gentlemen were the guests of R. B. Woolfolk, vice-president of the American Fruit Growers Inc., and from Orlando they traveled over practically every part of the citrus area of the state; and expressed themselves as delighted with their reception here and with Florida as a producing territory and as a place in which to live.

Their business on Blue Goose fruits is a very large one. They report with the British public the Blue Goose trademark takes precedence over any and all other brands or trademarks identifying imported fruits; and that the normally careful British consumers are thoroughly converted to the belief that their money spent for Blue Goose fruits always obtains its full worth.

They were particularly enthusiastic concerning the results obtained from the Blue Goose advertising campaign in Great Britain last season, stating that these had considerably exceeded the most optimistic expectations; and that the demand thus created with the consuming public has caused Blue Goose fruits to occupy a unique place in the regard of the green grocer trade there.

This campaign was not simply an adaptation of the customary American advertising of the Blue Goose trademark. Instead it was a carefully calculated and typically British advertising campaign to appeal to Britons in a manner to which they might be expected to be most responsive. A

Continued on page 2

BLUE GOOSE NEWS

OFFICIAL publication of the American Fruit Growers Inc., Growers Service Department, published the first of each month in the interest of the citrus growers of the state of Florida.

EDITORIAL ROOMS
502 Yowell-Drew Building
ORLANDO, FLORIDA



CHAINS BOOST DEMAND

FOR ADVERTISED GOODS

Continued from page 1

viding a remarkably effective and economical channel through which these same advertised products may find their way into the hands of the consuming public with minimum effort, and with an assured distribution previously impossible to obtain.

Once having worked out to their respective satisfactions that advertised goods actually stimulate store activities and distribution with consequent profit, and that the concentrated buying groups can and will pay fair prices for those articles for which public demand already had been created, the big buying groups and those sellers controlling widely advertised products have been working in relative harmony and with considerable mutual profit.

Of course, the large concern controlling a large output is the only type of seller which is in a position to deal thus satisfactorily with these large buying units. The requirements of the buyers are so large that only large selling concerns are in a position to supply them adequately. The buyers are interested in regular and certain supplies. They cannot afford to try to accommodate the operations of their stores to the handling of relatively small amounts of merchandise, however cheap; and they cannot afford to take chances of irregular or uncertain supplies. The big selling concern with established trademark recognition, and its own clientele among consumers, however,

Adv.

is able to meet the requirements; and therefore finds itself profiting largely by this newest development in modern merchandising. The manner in which Blue Goose fruits and vegetables are advertised by leading concerns among these large groups in various locations all over the country illustrates well how growers served by the American Fruit Growers Inc. have profited through this most recent development.

PROMINENT BRITONS ARE VISITORS IN FLORIDA

Continued from page 1

large British advertising organization was retained; and Messrs. Colyer, Pask and Webb with their associates and members of their force played a large part in seeing that the appeal to British palates and British pocketbooks was the best which could be devised, with the advertising department of the American Fruit Growers Inc., of course, lending its best efforts to the undertaking.

Continuation of this British advertising during the coming season will be along the same lines; and the British distributing forces are most enthusiastic, these gentlemen report, concerning the prospects.

Messrs. Pask, Colyer and Webb are not only the foremost fruit and vegetable handlers in Great Britain, but occupy a very prominent place in financial and business circles. Their wholehearted endorsement of Florida grapefruit, in which they specialize, and their self-evident appreciation for Florida as evidenced during their visit, are in a considerable sense a reflection of the best posted British opinion.

LIGHTER CITRUS CROP SHOWN IN CALIFORNIA

The Fruit World of Los Angeles (the daily citrus report of California), estimates the coming orange crop at 60 per cent of the 1928-29 crop, which season closes Nov. 1. On this basis, the 1929-30 crop should turn out 45,000 cars total, of which 24,600 would be Valencias and 20,400 Navels. The size of the crop seems to be "sopted" not only as to districts but also as to individual groves. Therefore the casual observer may easily be led to wrong conclusions. It is thought that a crop of 45,000 cars total would be a conservative estimate at this time.

For comparative purposes actual carlot shipments (starting with 1918-19), for the past 10 years, are given:

39,339—35,679—43,311 —29,575—
50,966 —47,635—37,679—50,030—
57,163 —46,922—75,000 (estimated)
—45,000 (estimated).

EVEN LARGER PROGRAM BLUE GOOSE ADVERTISING

The Blue Goose advertising program of last year, which specially featured the use of very considerable space in the Saturday Evening Post in addition to the customary extended use of newspaper space in the principal centers of fruit distribution, is to be much augmented during the coming season.

The gratifying results, and visible cumulative effect, of Blue Goose trademark advertising over the period of years since it was inaugurated have caused the management of the American Fruit Growers Inc. to arrange to expand still further the work which has made "Blue Goose" a household term for quality fruits and vegetables in hundreds of thousands of homes.

Besides the use of newspaper and magazine advertising, careful attention again will be given to window and store cards, hangers, posters and those other "dealer helps" which have always constituted a very important part of the organization's advertising campaigns; and which at times are credited with making many localities seem like homecoming celebrations in honor of the famous Blue Goose.

ENLARGING HAINES CITY PACKING HOUSE OF AFG

The Haines City packing house of the American Fruit Growers Inc., one of the prominent features of the Gate City of the Ridge Country, has been enlarged by an addition 34 by 153 feet; and the interior has been completely remodeled. Rearrangement of the entire machinery equipment in accordance with an entirely new plan is expected to add still further to the capacity and efficient operation of the big house.

A large refrigerating and precooling plant also has been added. Eight refrigerating or precooling rooms, with an ordinary precooling capacity of one and one-half carloads each daily have been added. The refrigerating unit has capacity permitting the later addition of two more rooms.

Work was completed within almost record time, the entire plant being made ready for operation beginning October 7, in order to provide for

The success of the eradication campaign looks more promising now than at any time since the work started, and it is the declared intention of the Federal authorities to push this campaign even more vigorously in the future than has been done up to the present time. It is our desire to cooperate in this work to the fullest extent of our ability.

W. M. Scott,
Manager, Florida Division
American Fruit Growers Inc.
Orlando.

the large assured tonnage this season from AFG growers served by this packing plant.

NUMEROUS IMPROVEMENTS IN PACKING HOUSES

Numerous improvements in machinery arrangements and other items making for increased efficiency of operation have now been completed in several of the owned and affiliated packing houses of the American Fruit Growers Inc. in Florida.

Careful packing always has been a most important feature of AFG policy; and nothing now has been left undone which might contribute to the better operation of the packing houses in Florida upon which dependence is placed for the continued superiority in the markets of the oranges and grapefruit identified under the Blue Goose trademark.

R. B. WOOLFOLK RETURNS FROM NORTHERN VACATION

R. B. Woolfolk, vice-president of the American Fruit Growers Inc., returned to Orlando the first of the

month from an extended vacation, a considerable part of which was spent with his family on the New England Coast.

It was a well earned vacation after last season's citrus activities. He has, however, returned in evident good health and considerably recuperated, as evidenced by the manner in which he has ploughed into business matters at Orlando following his arrival here.

CALIFORNIA CITRUS MAN LOOKS OVER FLORIDA

A. C. Barnes of Corona, California, accompanied by Mrs. Barnes, has recently been an interesting guest of members of the Florida division of the American Fruit Growers Inc.

Mr. Barnes is well known in citrus growing circles in California. His trip to Florida was one of observation. He was particularly interested in a close comparison of Florida citrus cultural methods with those of California, of which he is one of the leading exponents.

During his stay here Mr. Barnes was afforded opportunities to visit many of the citrus sections of the

state; and made the most of his contacts with progressive Florida citrus growers whom he met upon his rounds.

A. B. MICHAEL BACK IN BUSINESS HARNESS AGAIN

A. B. Michael, well known citrus grower of Wabasso and regional vice-president of the American Fruit Growers Inc., is back in Florida after an extended stay in North Carolina; and again is taking up actively his work in connection with the AFG organization.

A long and severe illness followed Mr. Michael's over-exertion as a volunteer fireman during a fire in Wabasso. His many friends in growing circles will be glad to learn of his full recovery, and the fact he is again able to resume his normal activities.

A ripe old age is nothing to brag about. Consider the tomato.

—Penn. Punch Bowl.

"Well you've got to say one thing for Bjinks. He's trying."

"Yes, very."—Wisconsin Octopus.

UNIFORMLY



THE BEST

If It's Blue Goose, It's Good

"Good fruit, but if marked Blue Goose would have sold seventy-five cents higher," says a wire from a northern market. The shipment in question was a test one under special conditions, for which reason it did not bear the Blue Goose trademark.

It brought a good price, but plus the Blue Goose trademark it would have brought a better one. Because it would have been worth more.

Dealers willingly would have paid more because of the quick sale assured by a waiting public confident of the quality of that which the Blue Goose trademark identifies.

In ordinary times under wholly normal conditions a well and widely known trademark is of large advantage in stabilizing prices. The public is willing to pay for that which commands the public's confidence.

In times when possible doubt may exist in the public mind concerning any class of product identification under a highly esteemed trademark is of tremendous value.

If it bears the Blue Goose trademark, hundreds of thousands of consuming purchasers know that it is good; and are willing to base their purchases accordingly.

American Fruit Growers Inc.

Orlando, Florida

DEPENDABLE



QUALITY

IMPRESSIONS

By The Impressionist

We glean from a recent report that in Georgia 33,404 peach TREES have been destroyed by federal and state order, due to prevalence of the phoney peach disease. And yet there hasn't been much fuss about it which could be heard outside the state.

During the last week in August there arrived in New York the first shipment of oranges ever sent to the U. S. A. from Chile. It was a trial shipment of fifty boxes. At the same time another lot of 250 boxes went to Europe, the first shipment of oranges ever to be made from Chile to European points. The oranges were large, of good quality, seedless; and in New York were well received in the market. The shipment checked out with less than one per cent decay. The growers on the west coast of South America are said to be planning for real commercial exports of both oranges and lemons beginning next year.

Previously in these writings we have expressed great confidence in the future of grapefruit canning in Florida. Watch now for real outstanding developments in that line within the next twelve months. When a few years ago we had the hardihood to predict that one dollar per box to the growers for grapefruit to be used for canning would some day be the ordinary thing, a lot of folks thought we were just a bit daft. However, we are willing now to repeat that statement; and to amplify it by saying that the time now is not far off. When it comes, growing grapefruit in Florida will be a well stabilized business.

Without comment we respectfully submit to our radio audience the following letter which was written to a prominent Florida man on September 10 from Greensburg, Pennsylvania, by L. H. Vinnedge, himself a Florida man, and president of the Vinnedge Farm Corporation of Vero Beach:

"Referring to proposed drastic regulations to be inaugurated this year against shipments of green fruit, covering this season's crop, I wish to call attention to flagrant evasion of this rule on a recent shipment of grapefruit from _____, Florida. This

car of fruit was shipped by _____ of _____, Florida under the _____ brand. I am enclosing a sample of the wrapper taken from one of these fruits. The shipment was made under Plant Board permit No. 40260, and the samples I inspected were from five boxes of fruit, size 54, goldens. The car was shipped to Pittsburgh, Pennsylvania and was sold on auction there. The five boxes inspected were purchased by a dealer in Greensburg, Pennsylvania. The fruit was picked green and colored. The coloring process was successful, but twelve fruit selected at random from these boxes were unfit to eat; and I assume the entire consignment will check out with the sample. Not only was the fruit green but the coloring process used evidently was injurious to the fruit, as four of the samples I examined showed indications of rot at the stem end. This decay had penetrated the fruit to a depth from one-half to a full inch; and the fruit was so bitter to the taste that it was absolutely worthless as a food product.

"This condition is serious, and is apparently a repetition of last year's conditions during the early stages of fruit shipments for the season. The dealer who handled this fruit in Greensburg advises me that it will be absolutely impossible for the trade to build up any kind of a market for Florida fruit if this condition is allowed to go on, as customers will buy the fruit only once and will not buy again.

"This matter came to my attention accidentally, but the seriousness of it leads me to place the facts before you for attention. As a resident of Florida, owner of a grove, and a shipper of citrus fruits who feels that a quality product is the only commodity which will establish a fair market for our products, I am filing my serious objections to this evasion of the law."

Joshua C. Chase, dean of the citrus fraternity, is said to have recovered fully from the shaking up he received a few weeks ago when the automobile in which he was traveling with Randall Chase overturned on a slippery clay road near Augusta, Georgia. At the time this is written, he is reported in Philadelphia, on the

"Please Say You Saw It In The Citrus Industry"

job and none the worse for the somersault of the car which threw him from the front seat into the rear seat and otherwise tumbled him about. Randall Chase was unhurt.

And now W. J. Krome of Homestead, pioneer of citrus activities in Dade County, has passed. He had been ill for some time, but his actual death was attributed to cardiac trouble, aggravated by the illness of his son Bob, and further by the losses in that section due to the September hurricane. One of the engineers who laid out and built the overseas extension of the Florida East Coast Railroad, Mr. Krome is said to have taken very hard the news of the washout upon the extension down on the keys, and this too acted as a complication. As one of the faithful and most progressive members of the Florida State Horticultural Society, W. J. Krome will be sadly missed among the gatherings of the growers who make the wheels go 'round in citrus Florida.

A thought induced by glancing at the calendar: It is now nearly five and one-half years since marketing agitation became the popular outdoor sport in citrus circles in Florida. Since early Spring 1924 we have had almost continuous agitation on those lines, with constant maneuverings, Continued on page 25



Beautify Your Home Grounds

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Reasoner Brothers'
ROYAL PALM NURSERIES
Oneco, Florida

Control of Stem End Rot In Coloring Florida Citrus Fruit

By H. R. Fulton and H. E. Stevens, Senior Pathologists, U. S. Bureau of Plant Industry

The use of gases in the coloring of Florida citrus fruits may lead to serious losses from stem end rot or surface blemishes unless the coloring process is carefully handled and the fruit is in proper condition for coloring. For the past year extensive investigations made at the U. S. Citrus Disease Field Laboratory, Orlando, Florida, indicate definitely that the use of gases with poor or improper ventilation and high temperatures or in excessive dosages will lead to a large increase of stem end rot or surface blemishes that destroy the value of the fruit. The following suggestions for avoiding decay and injuries should be given serious consideration:

1. The fruit itself is often a factor in the development of stem end rot. Fruit from some groves will go down with decay more rapidly and in greater abundance than fruit from other groves when subjected to similar conditions of gassing. It is advisable to make test runs for groves of unknown behavior in regard to rots before the general picking begins. A few boxes picked at random through the grove, gassed and held for a week to ten days will give a fair indication of how the fruit from such a grove will react to the coloring process. If a large percentage of rot appears, the fruit in that grove should be allowed to color on the trees.

2. To avoid rots and injuries and for results in coloring only fruit that is well along toward full maturity and that shows some break in color on the trees should be colored. Green fruit colors slowly and poorly at best and the longer fruit is held in the coloring rooms, the more liable it is to rot development, if any rot is present in the grove. Ordinary gassing temperatures of 80° to 85° F. and the humid conditions that prevail in the coloring rooms will advance stem end rot in three days time as much as the same fruit would develop in three weeks at temperatures in the fifties. Fruit that will color quickly in 36 to 48 hours is much less liable to rot than fruit held 72 hours or longer.

3. Fruit should be handled carefully to avoid bruising as bruises will

show as brown spots or develop into rots during coloring. Fruit should not be handled while it is wet with dew or rain.

4. Ventilation is probably the most important step in the gassing of fruits to avoid stem end rot. Proper ventilation is necessary to secure the best results in coloring and it will greatly reduce the amount of rots or other injuries that may occur. The coloring room should be provided with proper openings for ventilation, and the air in the rooms should be completely changed during the period of an hour before each dosage is applied. Unless special provision is made for adequate ventilation air tight rooms are apt to produce suffocation, and fruit under this condition will be injured or go down rapidly with decay in the presence of the gases used in coloring. Where the coloring rooms are lined or constructed with a porous wall board having good insulating qualities, such as Celotex, or similar material, less decay ordinarily develops than rooms of tighter construction. The rooms should not be overcrowded with fruit and it is well to leave four inch spaces between rows of boxes.

5. Do not exceed the standard dosage of one cubic foot of ethylene gas per 5000 cubic feet of room space. Check up carefully on room dimensions, measuring tank capacity and proper gauge reading. In practice the use of stove gas seems to give less trouble from decay or injuries than ethylene gas, but this is probably due to better ventilation or change of air in rooms where the stove gas is blown in. With poor ventilation, stove gas is as liable to cause injury or rots as ethylene.

6. Temperatures should be watched. Gas confined with high temperatures will cause injury. Ninety to ninety-five degrees is a most favorable temperature for stem end rot development, and if fruit is gassed at this temperature the per cent of rot will be greatly increased. The temperatures should be even throughout the room and kept down to 80° to 85° F. and a humidity of about 85% maintained.

7. After the fruit comes from the coloring rooms, it should be packed and well cooled down as quickly as possible.

8. The fruit should be moved rapidly from the time it leaves the tree until it reaches the consumer. The warmer weather of the early shipping season is very favorable for stem end rot development.

THE CANADIAN CITRUS

FRUIT MARKET

Continued from page 14

(aa), however, grapefruit when imported from the place of growth by ship, direct to a Canadian port, is dutiable as follows: British Preferential, free; Intermediate 50 cents and General \$1.00 per 100 pounds. Jamaican grapefruit, therefore, can now be sent into Canada duty free in view of the establishment of direct shipping services. Since American grapefruit in either case is subject to the General, or highest tariff, it can be seen that Jamaican shippers enjoy an advantage on the Canadian grapefruit market.

CITRUS FRUIT EXPORTS

WEEK ENDING OCT. 5TH

Grapefruit Exports from New York:

London	3,561 Boxes
Liverpool	1,929 "
Southampton	855 "
Glasgow	396 "

Orange Exports from Los Angeles:
London 38,475 Boxes

Porto Rican Grapefruit Shipments Retarded: According to a radio-gram from Trade Commissioner J. R. McKey, of San Juan, dated September 27, grapefruit growers are somewhat disappointed by the slow maturing of the grapefruit. Shipments of grapefruit were 11,000 boxes during the week of September 16, and 15,000 boxes during the week of September 23. Shipments for the week of September 30 were estimated at 17,000 boxes, but it was thought unlikely that exports would increase much before the middle of October when the movement should be heavy, if prices are at all satisfactory.

Growers See Citrus Fertilizer, Cover Crop Test Results

Forty Highlands and Manatee county citrus growers, led by County Agents Louis H. Alsmeyer and Leo H. Wilson, recently made a tour of the Citrus Experiment Station at Lake Alfred, with the special purpose of looking over the fertilizer and cover crops test plots. Dr. R. W. Ruprecht, chemist; W. E. Stokes, agronomist, and J. D. Warner, assistant, came down from the main station at Gainesville, and they, with J. H. Jefferies, superintendent of the Citrus Station, explained the experimental plots.

The attending growers expressed themselves as well pleased with the information obtained, and indicated that they would use this information in making up their fall fertilizer program. Most of the experiments had been running continuously on the same plot for eight years. Among the main observations made by the growers were these:

In test comparing different sources of nitrogen, one plot had received all its nitrogen in the form of manure, another in the form of blood, another in the form of mixed fertilizers commonly applied, and containing nitrogen from both organic and inorganic sources, another from sulphate of ammonia only, and another from nitrate of soda only. All plots received the same amount of nitrogen applied at the same time. In the plots which have received only sulphate of ammonia and nitrate of soda, inorganic nitrogen fertilizers, the trees had made the best growth. Dr. Ruprecht pointed out that since inorganic fertilizers are cheaper, it would seem that growers could save money by using them exclusively.

In the potash fertilizer plots, where all the other fertilizer elements had remained constant, it was found that a fertilizer analyzing 5 per cent potash apparently was giving as good results as the higher analysis. The plots receiving only 3 per cent potash three times a year yielded fruit which was considered slightly inferior to that from the 5 per cent plots.

In the cover crops tests, trees on the crotalaria plots were larger than those on the other plots, and apparently it will be possible to reduce the amount of nitrogen contained in the fertilizer applied in future. It was noted that apparently the worst split-

ting of oranges occurred on a plot on which no cover crops had been allowed to grow since the beginning of the experiment five years ago.

All of the plots at the station are fertilized three times a year, and in any one test there is only one variable, all other treatments being the same for each plot in the test.

FOREIGN REPORT AVAILABLE

There are available in the Jacksonville District Office of the Bureau of Foreign and Domestic Commerce, extensive reports on the German and Canadian markets for citrus fruits, which will no doubt be of considerable interest. These reports give detailed information and statistics on foreign trade, prices, etc., in fresh fruits in both Germany and Canada, and may be obtained upon request. A great deal of similar information is published weekly in the Department of Commerce circular entitled "Foodstuffs 'Round the World — Fresh Fruits."

Hale-Van Borssum Heat Processing System

Now Ready For Delivery

During the past two weeks a number of cars of fruit processed by this system have been shipped to market, the tests on each car being observed and test records made by representatives of the State Plant Board, each car being certified for shipment.

These cars, arriving at destination, have been sold at top prices, with no evidence of decay or damage of any kind.

Our test plant is now operating daily at the Tampa Union Terminal, and we will take pleasure in demonstrating this process to any interested parties. IF INTERESTED, LET US SHOW YOU.

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Tampa, Florida

"Please Say You Saw It In The Citrus Industry"

Citrus Development In Lower Rio Grande Valley of Texas

By Harry L. Sexton, in Mission Times

Oranges and grapefruit have been grown under irrigation in the Lower Rio Grande Valley of Texas since the establishment of the Spanish colonies in 1750, but the industry was not placed upon a commercial scale until 1920, following exhaustive tests by government experts and others to determine the proper rootstock. Heavy plantings began in 1921, a census completed in the summer of 1928 showing 477,000 trees planted between 1920 and 1923. By 1926 the annual plantings had been increased to 645,000, and the peak of plantings was attained in 1927-28 with 1,294,000 trees set in the orchard rows. The 1928-29 plantings are expected to show approximately the same as the preceding season. With approximately 4,400,000 trees planted, development is proceeding rapidly, although less than 15 per cent of the total number of trees are bearing. Approximately, 80 per cent of the past season's plantings are grapefruit.

The Marsh seedless is the favorite variety, representing approximately

70 per cent of the plantings. Duncan, Foster and Walters are the seeded varieties, and both Foster and Marsh Pinks are being planted extensively. Valencias, Parson Browns, Pineapple and Temples are the favored varieties for the orange plantings.

Lower Rio Grande Valley grapefruit is in heavy demand in the central markets, owing to its fine flavor and high sugar content. The sizes are approximately the same as the Florida and California varieties. The distinctive flavor is believed to be due to the long summer season, equable temperature and high fertility of the soil, which requires no fertilizer under ordinary conditions, though many growers are beginning to use fertilizer in small quantities with excellent results.

Shipments from the Valley in 1927-28, comprising fruit of the earliest plantings, totaled 1,600 cars, in the 1928-29 season, closing April 1 the shipments approximated 2,500 cars. According to estimates based on plantings, the 1929-30 shipments will be approximately 5,000 cars, with an

increase of 10,000 cars in 1930-31. The present acreage will not come into full bearing for five years, indicating that the 1934-35 movement of citrus fruits will range between 25,000 and 30,000 cars.

The extent to which the citrus fruit industry may be developed in the Lower Rio Grande Valley depends entirely upon consumption and development of markets. Approximately 75,000 acres have been planted. Citrus fruit can, however, be grown on practically all lands in the Valley, which now has over 350,000 acres producing citrus, winter vegetables and staple crops under irrigation.

Practically all major development projects under way in the lower border country are devoted almost exclusively to citrus fruits. During the past year four additional irrigation projects have been organized in Cameron county and two in Hidalgo, and the major part of the new acreage will be planted to fruit within two years.

Reforestation of Marginal Lands

Diversion to timber growing of certain marginal lands now being farmed at a loss is advocated as a measure contributing to farm relief by Secretary of Agriculture Arthur M. Hyde.

"Marginal" lands are those which, because of low fertility or unfavorable location, climate or topography, under normal conditions return such small or uncertain profits as to make successful agriculture doubtful.

"It would undoubtedly be good economics," Secretary Hyde said in a recent letter "to divert to profitable timber growing such marginal agricultural lands as are best suited for forest purposes and are now being farmed at a loss. the encouragement of such conversion would be sound public policy. Not only would it result in a greater return to the labor and capital employed, but in addition it would contribute permanently to agricultural stability and prosperity. Such conversion of use would help solve the problem of our future supplies of forest products and would contribute to soil conservation and flood prevention.

"Our agricultural economists know

that much land that is submarginal for agriculture is still being cultivated, notwithstanding the fact that many millions of acres of farm land have been abandoned during the past two decades. The pressure of increasing poverty will eventually force the cultivators of submarginal agricultural land to abandon their farms also. Meanwhile, however, their misdirected efforts not only lead to their own impoverishment but are an important factor in contributing to the depression of the entire industry.

"The proposal that a reasonable amount of such lands, in regions where depression is most acute and the prospects of early agricultural success most dubious, be purchased by the Federal Government or some of her agency, financially able to carry the investment for a sufficient period to realize on the greater value of the land for forestry purposes, has much to commend it as a humane and businesslike measure. Some such plan might possibly be worked out on a scale sufficiently large to be of real consequence as a farm relief measure. It should, of course, be coordinated with the forest land purchases

now being conducted by the Department of Agriculture under the general control of the National Forest Reservation Commission.

"In any event," the Secretary's letter continued, "the farm lands which have already been abandoned require attention. For the most part, such land under present circumstances springs up to an incomplete, inferior, and relatively unproductive forest. Unquestionably there needs to be a much broader conception of the forest as a farm crop, which by proper methods of establishment and culture can be made a real revenue producer, and a valuable feature of diversified agriculture. A more systematic and aggressive effort to secure the acceptance of this idea by farm owners and probably, in some measure, to provide for public acquisition of such lands would be desirable. * * *

"Many States have tried by exemptions, bounties, and by special forms of forest taxation to promote reforestation and forestry practice by private owners. To only a small degree have these efforts been successful. * * * On the whole, it ap-

pears that forest lands can and should bear their fair share of taxation. However, it is important to determine what is a fair tax to place on forest lands and then to develop a system providing for payment at such times and in such ways as will not be an unreasonable obstacle to growing forest crops by private owners."

IMPRESSIONS

Continued from page 21

organizations, proposed reorganizations, investigations, write-ups, write-downs, statements, misstatements charges, counter-charges, and what not. Turmoil and unsettlement has been almost constant. The only certain thing about what next week or next month would bring has been the certainty of uncertainty. And all this to what end? Just what has been accomplished? That is, in a constructive way? Of course, we all know what has been accomplished destructively. Grove values have been depreciated; growers' morale has been brought to a low point; and the whole Florida industry has been held up to the nation as a chaotic and unsuccessful undertaking. Speaking only for ourself, just one Florida cracker broadcasting, we are sincerely tired of the tumult and the shouting. Can't citrus politicking be called off, and the industry once more be allowed to focus attention on certain production problems where attention is needed? We move a recess.

J. Curtis Robinson calls our attention to the fact that our oranges and grapefruit are paying in freight charges almost nine times as much—based upon the proportion of such charges to the value of the shipments—as dressed beef pays. Yet the costs and hazards of transportation, from the standpoint of the carriers, are highly comparable. Well, kinks of that sort will never be ironed out by radio talks or statements to the papers, in our humble opinion.

Traveler: Porter, I want to be called at five o'clock in the morning.

Porter: Boss, Ah guess you-all isn't acquainted with these heah moden 'nventions. See dis heah button heah? Well, when you-all wants to be called you jest presses dat button an' we comes an' calls you.—Iown Frivol.

"Papa, what do you call a man who drives a car?"

"It depends on how close he comes to me."—Okla. Whirlwind.

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a good thing
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County Chambers of Commerce Doing Good Work

Orange County is one of twenty one progressive Florida counties that have levied a publicity tax or made an appropriation from general revenue funds for publicity purposes this year. Far seeing boards of county commissioners have realized that expenditures for proper publicity are a wise and necessary investment of funds that repays the county many fold.

Not a single county chamber of commerce that has operated this past year has been disbanded and all are functioning with capable boards of directors and effective programs of activities. Some of these county organizations, including the three oldest and best organized in Florida, Lake, Orange and Marion County Chambers of Commerce have requested the board of county commissioners to reduce the publicity appropriations and budgets have been so rearranged as to make these appropriations bring the largest possible returns to the people of these counties, and in each case the commissioners have made such appropriations.

Jefferson County in north Florida is so well pleased with the work of its county Chamber of Commerce which has a very limited budget that the commissioners have increased the publicity millage from $\frac{1}{4}$ of a mill to two mills or eight times the appropriation of last year, while another north Florida county, Gadsden, has increased its publicity tax from one to two mills. Martin County on the lower east coast has increased its appropriation also.

Among the counties sustaining well organized county chambers of commerce this year are; Gadsden, Jefferson, Lake, Marion, Martin, Orange and Sarasota and other counties making appropriations for publicity this year are: Broward, Clay, Dade, Hardee, Glades, Highlands, Hillsboro, Indian River, Lee, Madison, Manatee, Polk, St. Lucie and Walton.

Lake county has the oldest county chamber of commerce in Florida, it has carried on an aggressive campaign of publicity in that county for some ten years. Hon. W. M. Igou of Eustis is the father of the publicity tax plan in Florida, having secured the passage of the bill through the state legislature when he was in the senate, authorizing the levy of a county tax for this purpose.

Orange county has the second oldest

est county chamber of commerce in Florida, just entering upon its eighth successive year of service for this county making it "the best and most favorably known county in Florida", as its slogan states.

CITRUS EXCHANGE GETS INSTALLMENT ON LOAN

The Federal Farm Board to-day announced the approval of three loans as follows:

1. A supplemental commodity loan to the Tennessee Cotton Growers Association, not exceeding \$250,000.
2. A supplemental commodity loan to the South Carolina Cotton Growers Cooperative Association, not exceeding \$500,000.
3. A facilities loan not exceeding \$2,800,000 to the Florida Citrus Exchange.

One condition of the loan to the Florida Citrus Exchange is that the loan shall be secured by first mortgages on packing plants of local units of the Exchange; that these properties be appraised by a nationally known appraisal company and that the loan in no case shall exceed sixty per cent of the appraised value of any unit. A further condition of this loan is that the report of an audit now being made of the Florida Citrus Exchange by a nationally known firm shall indicate a condition satisfactory to the Board.

On the same date, the first installment of \$500,000 of the Exchange loan was placed on deposit with the Exchange National Bank of Tampa, to the credit of the Florida Citrus Exchange.

FOREIGN FRUIT MARKET SPECIALIST IS APPOINTED

Appointment of Frank A. Motz, of the Virginia Polytechnic Institute, Blacksburg, Va., as principal marketing specialist to acquire information in Europe regarding competition, demand, and marketing of American fruits, with headquarters at London, England, has been announced by Nils A. Olsen, chief of the Bureau of Agricultural Economics, U. S. Department of Agriculture. Mr. Motz will arrive in London in time to study the situation this season.

Mr. Motz succeeds Edwin Smith, who recently resigned as the bureau's foreign fruit marketing representative. Demand on the part of American fruit growers and shippers

for information regarding fruit production and marketing conditions abroad has been increasing, and the bureau has established specialized services on fruits in Europe to keep American fruit interests advised of production and marketing conditions in England and on the Continent.

Mr. Motz, a native of Minnesota, a graduate of Oregon Agricultural College, and who this year received the master's degree in horticulture from Virginia Polytechnic Institute, has been in charge of extension work in horticulture in Virginia since 1917, following extensive experience in the Northwest in the harvesting, inspecting, packing, shipping, and marketing of fruits. He has had unusually wide experience with the problems of production and marketing of fruits in both the Northwestern and Appalachian regions. He has been instrumental in popularizing fruit inspection work in Virginia, and for several years has been a member of the grades and standards committee in that State. He has given especial attention to the export business in Virginia apples.

Mr. Olsen says that the service rendered to fruit producers and shippers by the bureau in the foreign field has won hearty support and approval, and that it seems desirable to expand and strengthen this service in every way.

SOIL SHOULD BE REMOVED FROM CROWN OF CITRUS TREES WITH FOOT ROT

Removal of soil from around the crown of citrus trees infected with foot rot is recommended by Erdman West, mycologist of the Florida Experiment Station. Answering an inquiry recently on this subject he says:

"It is a good plan to remove the soil so that the foot rot lesions are exposed to the air. Removing dead bark with some sharp instrument is also good practice. The wound is painted with some safe disinfectant, such as Bordeaux paste, a weak lime and sulphur mixture, or carbolineum. This must not be caustic. This treatment should be delayed until all danger of frost is over. After the wound shows signs of healing the soil may be replaced."

"My office boy whistles while he works."

"You're lucky. Mine only whistles."
—Mugwump.

Anticlimax: An employee of the United States Mint drawing his salary.—College Humor.

PROPERTY CERTIFICATES FOR CITRUS FRUIT SHIPMENTS

Continued from page 7

Host fruits and vegetables in bulk shall not be moved within the State of Florida; PROVIDED, that the Board may issue permits for the movement of host fruits and vegetables from approved groves or fields to approved packing house under processing (canning, juice extracting) plants and from approved packing houses to approved processing plants when such movement is not to or through any point outside an Eradication Area and when the fruits and vegetables concerned are moved to such plants in a tightly closed railway car or in an automobile, truck or other vehicle which is properly screened or covered or otherwise so safeguarded as to prevent the spread or dissipation of the Mediterranean fruit fly; and PROVIDED FURTHER, that sterilized host fruits and vegetables in small quantities and in bulk may be transported in dining cars under permit.

4. S.P.B. Rule 42 C (4):

No person shall harbor or permit to exist on his premises within the Eradication Area any tree or other plant, except grapes, limes, mangoes, palms, bananas and avocados, which normally produce fruit or vegetables susceptible to infestation during the host-free period. When an inspector shall find on any public or private premises in any Eradication Areas any trees or other plants of kinds which normally produce fruits during the host-free period, the same shall be destroyed. The owner, or in his absence his agent, shall be notified to accomplish such destruction within ten days after receiving such notice. In event of inability to serve the required notice on the owner or agent, the notice shall be posted on the property and in the nearest post office. Upon failure by the owner or agent to comply with the notice to destroy, the Board shall remove and destroy the trees and plants with respect to which notice has been served.

P.Q.C.A. Regulation 3, Section A,

Par. 2.

ELIMINATION OF SUMMER HOST PLANTS—As essential to the maintenance of the host-free period, an infested State shall require and en-

THE CITRUS INDUSTRY

force the elimination through eradication areas of all host plants, wild and cultivated, which normally produce fruit or vegetables susceptible to infestation during the host-free period.

5. S.P.B. Rule 42 D (1) (a): P.Q.C.A. Regulation 3, Paragraph (3) (a): See 2 above.

RAINS RETARD RIPENING OF TEXAS FRUIT

Continued from page 10

"The weather at present is most ideal for the fruit to show prematurity and natural color. The fruit is full of sap, but just as soon as this growing condition ceases we look for the fruit to mature fast and be of excellent quality and show considerable color, and it will not be necessary to retain it in the coloring rooms more than half the time required to bring out the color.

"We are very anxious and will take care of our new membership as well as our trade as soon as the fruit has the body, flavor and will stand well under the margin of maturity test."

SHIPMENT OF MANURE PERMITTED

Chairman P. K. Yonge of the State Plant Board has authorized an exception to the present regulations which will permit movement through the eradication area of manure in solid car loads when such movement is made by "Red Ball" fast freight. Railway companies desiring to handle such movement may secure special permits therefor from the State Plant Board office at Orlando.

This exception has been made at the request of truck growers in Dade County and elsewhere and is to allow them to secure adequate supplies of manure for use in connection with coming truck crops. Most of the fertilizer material thus transported will come from other states.

Manure originating within the

eradication area will not be permitted to move to points in Florida outside the eradication area, or to points in other states.

Twenty-seven

For White Fly and Sooty Mould

Clean your trees of White Fly and Sooty Mould with a thoro application of VOLCK. It will also clean up any scale that may have survived thru the summer.

Talk with your nearest dealer.

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"Please Say You Saw It In The Citrus Industry"

CORRECT HORTICULTURAL NAMES OF CITRUS FRUITS

Continued from page 5

read glowing accounts of some citrus marvel of foreign lands. It may well seem to be the "best orange in the world" to the writer and yet prove ill adopted to our conditions. Furthermore the habits of eating, and methods of marketing have most to do with the relative value of varieties. Most Orientals eat their oranges and pummeloos out of hand—not cut in two and scooped out with a spoon. They naturally prefer loose skinned oranges, and rather firm large pummeloos—the thickness of the peel is a matter of no great consequence.

Neither are the fruits put through such a strenuous preparation for packing as are our fruits. There is no soaking tank,—washer dryer, polisher, grader and sizer to be encountered, the loose fruits going in by basket directly from the grove to the markets in most cases. This makes a vast difference in standards of excellence. Our Citrus fruits must have shipping quality as well as eating quality and must first of all be produced in abundance.

While touching on the subject of securing the important citrus varieties of the Orient I am glad to be able to state that the varieties especially stressed by Dr. Webber and Dr. Tanaka have been on several different occasions introduced in this country, varieties such as the Ponkan, Tankan, Sekkan, Wase Satsuma, Kaopan pummelo and the Chamoudi orange, the famous orange of Palestine. It is not enough, however, to merely make introductions of varieties,—they must be studied in their original home as already shown with the Ponkan. These studies are being made as rapidly as possible and it may be found, as indicated by Dr. Tanaka's studies, that there are special strains originating as bud mutations, that are much more valuable than the variety commonly grown, and special stocks may be necessary to bring them to perfection.

The potential wealth of material in China and the Orient may be judged by the fact that a treatise published nearly 800 years ago, "The Chi lu" of Han Yen-Chih, lists 27 varieties of citrus grown in one district,—(Wen-Chow) each variety with a fairly good description. Dr. Walter T. Swingle learned of this ancient treatise on one of his trips to China and arranged for its translation. Some of the statements of this early Chinese writer show an appreciation of the requirements for successful growing of oranges quite as advanced in some lines as that of our mod-

IMPORTANT to Citrus Growers

It is now more important than ever that you produce quality citrus fruit.

While it is acknowledged that Florida oranges and grapefruit contain more juice, do not forget that the consumer buys with the eye. Fruit with fine texture and quality has an appetite appeal that brings the highest price.

ORANGE BELT BRANDS will help your trees to produce the kind of fruit that consumers want, and return to you a greater profit from your crop.

Consult our Field Service Department. Our experts will be glad to help you with your fertilizer problems.

There IS a Difference In Fertilizers

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ern citrus expert. They know for instance that fruit decay was largely caused by clipper-cuts, long stems and rough handling and careful instructions are given as to how to avoid these faults in picking fruit. They knew that the tangerine comes true from seed and does not need to be grafted, an observation that seems to still hold true to judge from a seedling Dancy grove now in existence near Hawthorne in this state.

Thus it appears that there is still much for us to learn about Citrus in its original habit. A knowledge of correct names of varieties with local synonyms is a first step. We cannot be expected to adopt all these exotic and often difficult names and discard our familiar names, when such exist, but it is essential that we should know the important varieties by all the names they bear elsewhere, so that citrus specialists of whatever nationality may understand each other's writings. With the great strides recently made in transporting and marketing citrus fruits, no citrus section can afford to be ignorant of what is going on in the rest of the world.

AD WORKS OVERTIME

Vero Beach, Fla.,
Sept. 30th, 1929.

The Citrus Industry,
Tampa, Fla.

Gentlemen—

In July, we sent you an ad. for a Packing-house manager. The item has been continued which has brought many applications, while the position was filled on Aug. 5th. Please withdraw this ad. as it is not doing any good to anybody but has caused scores of men to apply, after the position was filled, and we have been put to the trouble to answer to all of these unnecessary applications.

Yours truly,

Vero Indian River Producers
Association,

Per W. L. Hammiel
W.L.H. Secretary.

FORMER COUNTY AGENT DIES AT WACO, TEXAS

Gainesville, Fla.—News has been received by Agricultural Extension Division officials of the death recently at Waco, Texas, of R. A. Conkling. Mr. Conkling was county agent in Palm Beach County on two different occasions, his total service in that capacity lasting over four years. He resigned there about five years ago on account of failing health. He is the father of Commodore D. H. Conkling, publisher of the Palm Beach Post.

Now look for the SILVER LINING

THE fruit fly seems to be licked. State and Federal forces have combined to put him out of business. Perhaps the fruit fly was a cloud with a real silver lining, the Florida Times-Union suggests . . . for thoroughly sprayed and cleaned-up groves are ready now to produce finer fruit. Thousands of growers are all set to make a bigger, better citrus crop than ever before. Good prices, too.

And right now, when economical grove management is so important, you'll find your strongest ally in Chilean Nitrate of Soda. The Clearwater Sun and Herald reports editorially that many growers are using only Nitrate of Soda on their trees this year. For Chilean Nitrate, by itself, *without* any other fertilizer, works wonders for citrus.

The quick-acting nitrogen in Chilean Nitrate feeds your trees the strength they need against the winter season. Next February your trees will set a much heavier bloom—which means, of course, a greater yield. Larger fruit, that grades higher, colors earlier and has higher sugar content. All for just a few cents a tree!

Visit the experiment station at Lake Alfred. See the results of 8 years' tests of nitrogen fertilizers. See for yourself how profitable Chilean Nitrate is.

Valuable Fertilizer Book—Free

Our new 44-page book "How to Use Chilean Nitrate of Soda", contains fertilizer information for citrus and all other crops. Ask for Booklet No. 1, or tear out this advertisement and mail it with your name and address written on the margin.

Chilean Nitrate of Soda

EDUCATIONAL BUREAU



Orlando Bank & Trust Bldg.
Orlando, Florida

In writing please refer to ad No. 25-D

"Please Say You Saw It In The Citrus Industry"

FEEDING CITRUS

Continued from page 3

tilization gained strength in proportion to the influence of those supporting them rather than because of proven superior merit. Citrus fertilizer practices took form and, with more or less modification in favor of new theories, represent the common practice at present.

Fortunately for the citrus growers, the question "How shall I fertilize my grove?" is being rather definitely answered by the State Experiment Station. As a result of carefully planned and carefully conducted fertilizer experiments begun a number of years ago facts are being developed which greatly simplify the whole subject of citrus fertilization.

A number of experiments have been in progress from eight to ten years with the result that much in the way of facts about citrus fertilization has been developed.

In keeping with the policy of the Chilean Nitrate of Soda Educational Bureau the making of a citrus fertilizer recommendation has been withheld until a reliable and authentic basis for such a recommendation is available. Confident a sound basis is now provided, the following recommendation is offered:

"Based on available experimental data, the opinion of horticultural authorities, the observation and experience of progressive citrus growers, we recommend that fertilizer for all varieties of citrus consist of Chilean Nitrate of Soda, phosphate and potash. Experimental work with fertilizers for citrus indicate that citrus trees have no particular preference as to the kind of phosphate or potash. On the other hand citrus trees do show a decided preference for nitrogen applied in the nitrate form, such as Chilean Nitrate of Soda. This fact is substantiated in the results of citrus fertilizer experiments which have been carefully conducted over a period of years.

"All of the phosphate and potash should be applied on a per acre basis, in one application in the fall or spring. Where it is the practice to grow cover crops in citrus groves, and this is highly desirable, the phosphate and potash should be applied broadcast in the middles and around the trees when the cover crop is planted. In young groves not yet in bearing, apply a mixture containing the equivalent of 400 pounds superphosphate and 100 pounds muriate of potash. After the trees begin bearing, continue the annual phosphate applications at the rate of 400

pounds per acre. The annual phosphate application should not exceed 600 pounds per acre regardless of the age and size of the trees. When the bearing stage is reached the potash in the mixture should be increased to 200 pounds per acre and, additional potash should be added to the mixture at the rate of 100 pounds per acre as the trees reach a production of three, six, nine and twelve boxes of fruit per tree. For example, a grove producing six boxes of fruit per tree should receive annually a mixture of 400 pounds of phosphate and 400 pounds of potash per acre.

"Apply a total of one half pound of Chilean Nitrate per tree per year of age, plus one pound per box capacity of the tree. For example,

twelve year old trees, producing six boxes of fruit per tree should receive a total of 12 pounds of Chilean Nitrate during the year. This schedule should be followed for all varieties of citrus up to twenty years old. For trees above twenty years old, follow the schedule for twenty year old trees.

"Of the total Chilean Nitrate of Soda applications for the year, four-tenths should be applied in the early spring, two to three weeks in advance of the usual blooming date to help the trees through the first flush of spring growth and, to aid in the setting of a good crop of fruit, three-tenths in early May ahead of the summer rains to influence favorable fruit development, and three-tenths

Ripen, color, blanch with ETHYLENE

Increases profits—Saves time—Reduces losses



Inexpensive

Easy to use

All these advantages

1. Greatly reduces time required for ripening.
2. Prevents waste from rots and fungous growths.
3. Improves flavor.
4. Produces better color by more complete action on the green pigments.
5. Ripening and coloring go on simultaneously.
6. Makes possible the marketing of heretofore unknown tropical fruits.
7. Ripens and colors fruits and vegetables that mature late in the season.
8. Is inexpensive and easily used. Simple apparatus and little experience required.
9. Can be applied equally well to a few crates or a whole carload of fruit or vegetables.
10. Is neither injurious nor dangerous. Widely used. A proved success.

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in the early fall to further aid in developing the fruit, and to build up the tree reserve, which is very essential in withstanding the winter cold, and in insuring a satisfactory bloom the following spring.

"Whenever there are indications that the fruit will be undersized, or when there is an indication of a need for additional nitrogen as evidenced by yellowing of the leaves, an additional application of Chilean Nitrate should be made at the rate of from 1 to 6 pounds per tree, depending on the size of the trees and the crop of fruit being carried.

"Growers should always keep clearly in mind that the Nitrate applications should be made on a per tree basis and evenly over the entire root feeding area, to supply the necessary nitrogen for tree growth and fruit production and that phosphate and potash should be applied broadcast on a per acre basis directly for the production of cover crops and indirectly as a source of food for the trees and fruit."

NEW FRUIT REGULA-

TIONS ANNOUNCED

Continued from page 6

Disposition of Culls and Refuse

ALL CULLS AND REFUSE containing host fruits or vegetables shall be destroyed by completely burning it in an incinerator or by burying it in a pit in the following manner:

Put a heavy coating of oil on bottom of pit to kill any fruit fly larvae that may leave the fruit and attempt to go into the ground. Then put in a layer of garbage, cover with lime, add another layer of garbage, then lime, and continue until pit is ready to cover. Put a liberal coating of lime on top of the garbage, cover with two or three inches of dirt. Soak this covering of dirt thoroughly with oil, and then cover with at least three feet of dirt.

Under no condition shall host fruits or vegetables, culls or refuse containing such material be fed to hogs, poultry, or other livestock, except under special permit of the Plant Board and under such precautions as may be required.

Supervision

In order that the Regulations be carried out in a manner satisfactory to the United States Department of Agriculture, it is necessary for the State Plant Board to issue instructions under which the packing houses may operate. At the present time it would appear necessary that Inspectors be stationed where they will be able to supervise the operation of

each packing house. It will be the duty of such Inspector to see that all packing house operations are conducted in accordance with the instructions of the State Plant Board, and to issue permits for the shipment of fruit from such packing house, if a Permit Agent is not available.

Cap says that Walt has feet like a camel's—they go days and days without water.

Hat pins with heads broken off and stuck through candles keep the candles in shape during hot weather, says Miss Bertha Henry, home demonstration agent in Okaloosa County.

County Agent B. E. Lawton of Madison has been instrumental in starting commercial production of turnips in the county. Twenty-five acres have been signed up for this fall.

Combination Coloring and Processing Equipment

Some very definite information about coloring fruit has been developed which indicates that the following six rules must be observed in the coloring room if results are to be at all satisfactory. These six rules are:

- 1st. Uniform temperature in every part of the coloring room.
- 2nd. Exact temperature control with not more than 2° variation.
- 3rd. High humidity—not less than 90%.
- 4th. Constant ventilation—a continuous addition of a small amount of fresh air during the period of treatment.
- 5th. Ample heat available to bring heat up to temperature quickly. 85° for coloring and 110° for processing.
- 6th. Free and continuous circulation of air in the room with no heavy blasts of air striking the fruit.

It has been determined that decay in the coloring room or soon thereafter is generally the result of improper coloring operations. The above six rules if observed will remedy this trouble in most cases. They apply with equal force to processing operations.

A plant of this kind will give you an ideal arrangement for both coloring and processing. If you later on only wish to color the surplus heat available will shorten the time required and in this way increase your output and reduce your decay.

We will be glad to quote you definite figures on this equipment—the cost is much less than originally expected.

Florida Citrus Machinery Co.

Division Food Machinery Corporation

B. C. Skinner, Pres.

Dunedin, Florida

FRUIT GROWERS BENEFIT BY FEDERAL FARM LOANS

Continued from page 9

ity loan of \$25,000, of which amount \$15,000 was approved by the Board September 12. No advances have been called for.

"The above applications for loans total approximately \$70,000,000, of which \$57,000,000 has been tentatively approved by the Board. Only \$686,600 has been called for to date.

"In by far the larger number of cases, instead of sending in a definite request or application for a loan, individuals or groups representing co-operatives have appeared before us to find out just how to go about it. We have had such hearings every day the Board has been in session here in Washington, and in addition have met with various groups in Chicago, where we were meeting with the grain people, and also at Baton Rouge at the Institute of Cooperation.

"The officers of the Kansas Wheat Growers Cooperative Association have conferred with us with respect to financing the new terminal elevator which they contemplate building at Wichita.

"Mr. Stone, the Vice-Chairman of the Board, has met with tobacco growers of North Carolina, South Carolina, and Virginia, and initial steps are now being taken to organize cooperatives in the tobacco belts of each of these States.

"Mr. Victor C. Follenius, General Manager of the Hood River Apple Growers Association, of Oregon, appeared before the Board members at Baton Rouge in July, and later here in Washington. His position is worthy of note in that while he stated that perhaps they would want some financial assistance on various facilities for packing houses, and storage plants, he made it clear that they did not want the Board to undertake any stabilization program on their commodity.

"We have also had a number of requests from the cooperative canning associations in Oregon with respect to facility loans. The Division of Cooperative Marketing of the Department of Agriculture is now making an investigation of this situation.

"The Florida Avocado Growers, the Peanut Growers Association of Virginia and North Carolina; the Montana Bean Growers Association; the Colorado Bean Growers Association; the Michigan Bean Growers; the Wisconsin Tobacco Growers Pool; the Orange County Fern Growers Association of Florida; the American Rice Growers Cooperative Associations of Louisiana and Texas; repre-

sentatives of the American Sugar Cane League; the Rio Grande Valley vegetable growers; the citrus group representing the New Orleans Association; representatives of the fig industry of Texas; and representatives of the strawberry belts of Texas and Mississippi, have all appeared before the Board and discussed their problems, but none of these have as yet made any definite request for financial assistance. Mr. A. A. Turner, Extension Specialist in charge of the

colored extension work in Florida appeared to discuss a program of federating a group of local vegetable growers who expect to call for assistance but as yet they have not done so.

"Very truly yours,
"Alexander Legge,
"Chairman, Federal Farm Board."

In writing advertisers please mention The Citrus Industry.

1,000,000 More Boxes Signed Up For BROGDEX

The complete Brogdex System will be installed for this season's use in the following houses:

**Winter Garden Citrus Growers' Association
Manatee Citrus Growers' Association
International Fruit Corporation, Lynchburg
International Fruit Corporation, Fuller's Crossing**

These four houses have a normal capacity of over a million boxes a year.

The market reaction to Brogdexed fruit last year was most favorable. Buyers have come to realize the many advantages of the Brogdex control treatment for decay and shrinkage and pay more for fruit so treated.

Florida fruit is admittedly of better flavor and of greater juice content than fruit from California but unfortunately it does not keep as well.

The Brogdex System corrects this trouble and makes it possible to get the better Florida fruit that keeps. As a result Brogdex shippers last season realized more for their fruit than their neighbors across the way. The Valencia season price preference was 71c a box more in the New York Auctions.

These new Brogdex houses will benefit in many ways. The control of decay and shrinkage, the better appearance of their fruit, the saving in refrigeration, the ability to hold in storage for better price levels, the building of a demand for their brands—all are revenues of increased profits.

And to realize these benefits it will cost these houses only a few cents per box packed, an amount so small as to be hardly worth considering in view of the benefits possible. May we not get together for a conference?

Florida Brogdex Distributors, Inc.

B. C. Skinner, Pres.

Dunedin, Florida

FISH OIL RECOMMENDED AS ADHEVEISE IN SPRAYS

Continued from page 9

Among the problems incident to gipsy-moth control work are those of applying poison sprays effectively. Lead arsenate is the spray most used, but with it is needed some other substance as a spreader and sticker, preferably some material that will make the spray adhere to the leaves throughout the season in spite of rain or other weather conditions. Many different substances have been tried for the purpose—soap, glue, casein, molasses, gelatine, glucose, flour, and various oils.

Experiments carried on by the Bureau of Entomology of the United States Department of Agriculture have shown that, of these substances, the oils, especially linseed, fish and corn oil, gave by far the best results. Linseed oil is the most satisfactory of all, but it is also expensive; and when after numerous experiments on trees at various stages of growth, it was found that fish oil gave almost as good results at a much lower cost, it was felt that fish oil could be recommended as an economy in large-scale control operations.

Fish oil mixes practically as well as linseed oil with lead arsenate, and is nearly as adhesive. Foliage sprayed with a fish oil mixture as early as the first week in June was found in September still well covered with the spray although some rain had fallen. The use of either oil, but especially fish oil, makes it possible to reduce with safety the proportion of lead arsenate used, and to start spraying operations sooner, even though the foliage is small and likely to grow, since the quantity of poison that adheres remains effective. A few experiments have also indicated that fish oil is a good adhesive to use with lead arsenate and Bordeaux mixture.

Details of the experiments conducted at different times with various adhesives are given in Technical Bulletin 111-T, published by the United States Department of Agriculture. The work was done by Clifford E. Hood, Associate Entomologist, who is the author of the bulletin. Copies may be obtained upon application to the U. S. Department of Agriculture, Washington, D. C.

BROGDEX COMPANY WINS DECISION

At Philadelphia on October 7, the United States circuit court of appeals upheld the decision of Judge Hugh M. Morris of the Federal district court of Delaware, who some months ago ruled that the American Fruit

THE CITRUS INDUSTRY

Growers Inc. had infringed on the patented process held by the Brogdex Company for a process to prevent and cure "blue mold" on citrus fruits.

The Brogdex Company has also filed suit on this same patent in the U. S. District Court at Philadelphia against the California Fruit Growers Exchange for infringement, which it is said runs into many millions of boxes. It is said that there has also been large infringing use in Florida and California by other concerns for which reason is now under consideration.

STATION DAIRY HERD IS FREE OF DISEASE

Gainesville, Fla.—Dr. A. L. Shealy,

Thirty-three

head of the animal husbandry department of the Florida Experiment Station, has received a certificate from the United States Department of Agriculture showing that the Station's dairy herd has been tested and found free of tuberculosis. Sixty-three animals of the 73 in the herd were over six months old and were tested.

The Station herd is tested every 90 days for contagious abortion, and no reactors have been found for the past 15 months.

Cuban yellow flint corn produced 12 tons of silage per acre on the farm of the Vero Beach Dairy without any fertilizer. The corn was grown after potatoes.

ONE GROWER TELLS ANOTHER GROWER

ABOUT NACO BRAND RESULTS



Reports from all over the state show that NACO fertilized groves are in a superior condition, both as to tree growth and crop set . . . which promises a good crop for next year.

Fertilizer alone could not bring about this splendid condition, but watchful care and proper cultivation of the grove plus the right kind and quantity of NACO Brand Fertilizers did make these results possible.

One grower tells another of the fine results obtained from the use of NACO Brands, of the co-operation and practical suggestions of our field representatives, of the quality goods and prompt service . . . the recommendations of our old customers is largely responsible for the growing list of new customers and the increasing volume of sales of NACO Brand Fertilizers.

NITRATE  **AGENCIES**
1401-1405 LYNCH BUILDING JACKSONVILLE FLORIDA

SATSUMA FESTIVAL TEN TIMES LARGER THAN PREVIOUSLY

The Satsuma Orange Festival to be held in Marianna, November 14th, 15th, and 16th, has reached such enormous proportions that the association has decided to make it of importance to Georgia and Alabama as well as Florida.

Advertising novelties for automobiles have begun to arrive and the event is to be advertised in this manner all through the South.

Although the work of soliciting exhibits will begin October 1st, several counties have already organized not only for exhibits but for floats, and a very large number of individual growers have written asking for space in the exhibit hall.

Mr. Charles O. Reiff, general director, says that while last year's satsuma festival amazed many thousands that this year's event will be fully ten times larger.

Many exposition shows have been contracted for and also free acts and free fireworks. Letters received from all parts of Florida indicate that there will be hundreds of the state's most prominent citizens who will assemble at Marianna on this occasion. Every county in the satsuma growing area will be represented on a large scale and the number of floats will form a parade longer than any ever witnessed in North and West Florida.

In addition to the many announced features of a spectacular nature the festival association has selected Mr. J. F. Gasthoff, of Danville, Ill., who has national fame as a decorator and who is also a manufacturer of decorative novelties, as official decorator for the festival. Mr. Gasthoff is already in Marianna and will immediately bring his staff of decorators to this section of the state with a view to building floats for various communities in all sections of Florida west of Jacksonville. He has won first prizes in many of the greatest spectacular events in the United States during the past seventeen years and is recognized for his artistic taste and gorgeous floats.

The orange parade, which will feature a very large number of magnificent floats, will take place on Friday, November 15th. Those in charge of the festival declare that this parade will exceed anything of its kind in the history of Florida, being rivalled only by the Gasparilla pageant, which is an annual event in Tampa.

The object of the satsuma festival is to show north and west Florida's resources in general and the progress made in satsuma orange culture in particular.

THE CITRUS INDUSTRY

Nine purebred Angus bulls were bought by Nassau County livestock men recently, reports A. S. Lawton, County Agent.

For Sale, Want and Exchange bulletin has been established in the office of County Agent John H. Logan of Hernando for the use of farmers in the county.

In writing advertisers please mention The Citrus Industry.

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The rate for advertisements of this nature is only five cents per word for each insertion. You may count the number of words you have, multiply it by five, and you will have the cost of the advertisement for one insertion. Multiply this by the total number of insertions desired and you will have the total cost. This rate is so low that we cannot charge classified accounts, and would, therefore, appreciate a remittance with order. No advertisement accepted for less than 50 cents.

REAL ESTATE

FOR SALE—By owner, eighty acres, two-year-old best looking grove at reasonable price. Howey-in-the-Hills. For further information write "A. Z." P. O. Box 1261, Orlando, Florida.

WILL EXCHANGE West Texas cattle ranch for unimproved or improved land in Florida. What have you? Give price and full particulars. T. E. Bartlett, 5410 McKinley Ave., El Paso, Texas.

FOR SALE—Pineapple land in winterless Florida. \$15 an acre. Almont Ake. Venus, Fla.

WANT TO SELL HALF INTEREST IN FIFTEEN ACRE SATSUMA BEARING GROVE ON HIGHWAY NEAR PANAMA CITY. ROBT. LAMBERT, OWNER. FOUNTAIN, FLA.

SATSUMA BUDWOOD from Bearing Trees. Hills Fruit Farm, Panama City, Fla.

WANT TO hear from owner having farm for sale; give particulars and lowest price. John J. Black, Box 93, Chippewa Falls, Wisconsin.

MISCELLANEOUS

RUNNER peanuts—Spanish peanuts Early speckled - Osceola - White Chinese and Bunch Velvet beans. All varieties peas and Soybeans. Large or small lots. H. M. Franklin, Tennille, Georgia.

MACHINERY WANTED

Tractor wanted, 10-20 McCormick-Deering. State serial number, condition and best cash price. Address P. O. Box 6, Fort Meade, Florida.

FOR SALE: Splendid bearing citrus grove in Lee County, far removed from Fruit Fly infestation. Will produce 20,000 boxes coming season. If you want this grove address P. O. Box 295, Fort Myers, Fla.

NINETY DAY VELVET BEANS. Late Speckled Velvet Beans, Bunch Velvet Beans, Crotolaria Seed, latest crop, re-

cleaned, best quality seed. Very attractive prices for immediate shipment to close out this stock. Stocks limited. E. A. Martin Seed Co., Established 1875. 202-206 E. Bay St., Jacksonville, Fla.

HIGH BLOOD PRESSURE easily, inexpensively overcome, without drugs. Send address. Dr. J. B. Stokes, Mohawk, Fla.

WHITE WYANDOTT Cockerels, regal strain—the best in the country, direct from Martin pens. Utility and show birds \$5.00 each; also eggs for hatching \$5.00 per 15. W. A. King, Gen. Del., St. Petersburg, Fla.

WANTED COMPLETE LINE OF CITRUS GROWERS' SUPPLIES

A well known reputable firm of national scope, marketing certain materials required by citrus growers, is extending its line of merchandise to cover complete requirements of its customers.

If you have something excellent to merchandise—fertilizer, orchard hesters, pest control material or equipment, or any similar product for wide distribution—I can tell you whom you should see.

Address: J. T. Pierson, 503 South Union Drive, Los Angeles, Calif.

BEGGARWEED SEED. Place your order for Beggarweed seed now and be assured of delivery. Write for special prices. Wm. G. Ranney, Box 297, Monticello, Fla.

PUREBRED PULLETS FOR SALE—White Leghorns and Anconas ready to ship. Barred Rocks and R. I. Reds shortly. Several hundred yearling White Leghorn hens now laying 70%. Write or wire for prices. C. A. Norman, Dr. 1440, Knoxville, Tenn.

LAREDO SOY BEANS, considered free from nematode, excellent for hay and soil improvement. Write the Baldwin County Seed Growers Association, Loxley, Alabama, for prices.

FARMER AGENTS: Make \$25.00 weekly selling Comet Sprayers. Profitable winter employment. You take orders. We deliver and collect. Commissions weekly. Established 35 years. Particulars free. Rusler Co., Box C-18, Johnstown, Ohio.

FOR SALE—Dairy and stable manure, ear lots. Link & Bagley, Box 464, Tampa, Fla.

AVOCADOS - SEED — Grafted. Reliable bearers only. John B. Beach, West Palm Beach, Florida.

BABY CHICKS: Send no money, shipped C. O. D., pay mail man when delivered. Leghorns \$14.00 per 100; reds, orpingtons, minorcas \$16.00; mixed \$13.00; live delivery, postpaid. Florida Baby Chickery, Lakeland, Florida.

WANTED—To hear from owner of land for sale. O. Hawley, Baldwin, Wis.

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